

Structural Case in Finnish

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1 Introduction

1.1 Morphological case and abstract case

The fundamental fact that any theory of case must address is that morphological form and syntactic function do not stand in a one-to-one correspondence, yet are systematically related.¹ Theories of case differ in whether they define case categories at a single structural level of representation, or at two or more levels of representation. For theories of the first type, the mismatches raise a dilemma when morphological form and syntactic function diverge. Which one should the classification be based on? Generally, such single-level approaches determine the case inventory on the basis of morphology using paradigmatic contrast as the basic criterion, and propose rules or constraints that map the resulting cases to grammatical relations.

Multi-level case theories deal with the mismatch between morphological form and syntactic function by distinguishing MORPHOLOGICAL CASE on the basis of form and ABSTRACT CASE on the basis of function. Approaches that distinguish between abstract case and morphological case in this way typically envisage an interface called “spellout” that determines the relationship between them. In practice, this outlook has served to legitimize a neglect of inflectional morphology. The neglect is understandable, for syntacticians’ interest in morphological case is naturally less as a system in its own right than as a diagnostic for abstract case and grammatical relations. But it is not entirely benign: compare the abundance of explicit proposals about how abstract cases are assigned with the minimal attention paid to how they are morphologically realized.

The position taken here is that the theory of case belongs both to morphology and to syntax. It must draw on morphological principles to explain the characteristic organization of case paradigms, such as the patterns of syncretism

¹Warm thanks Arto Anttila for always being ready to share his judgments of the Finnish data, to Kristián Árnason for suggesting the possibility of the DEP constraints discussed in section 3, and to Ida Toivonen, Diane Nelson, and Satu Manninen for comments on a draft. The responsibility for errors of fact or interpretation is mine.

and zero allomorphy that recur in language after language. It must draw on syntactic principles to account for the relation of abstract case to phrase structure and to thematic structure or argument structure. And it must develop a constrained theory of the interface between morphological case categories and the abstract case categories defined in the syntax.

Finnish poses interesting challenges on all three fronts. The identification of the case categories at the morphological level is problematic in several respects. However it is solved, the “spellout” relationship is far from trivial. At the same time, Finnish also calls into question the notion that abstract case is predictable by general principles from phrase structure or from some level of thematic or argument structure.

An answer to these challenges is attempted in this paper. Using the approach to morphological case and abstract case of Kiparsky 1997, coupled with the OT Correspondence Theory of McCarthy and Prince 1995, Finnish clause structure can be derived by the interaction of constraints of considerable cross-linguistic generality. The analysis will show that abstract cases are predictable from thematic structure to a much greater extent than is apparent from the extraordinarily diverse variety of clause types.

1.2 The Finnish case system

Pedagogical grammars from Setälä 1880 on have presented the case system of Finnish nouns and pronouns as in [1], where the first four rows of the paradigm make up the subsystem of STRUCTURAL CASES that is the topic of this article.

[1]

	Nouns: ‘bear’		Pronouns: ‘you’	
	Singular	Plural	Singular	Plural
Nominative	karhu	karhu-t	sinä	te
Accusative	karhu, karhu-n	karhu-t	sinu-t	teidä-t
Genitive	karhu-n	karhu-j-en	häne-n	he-i-dä-n
Partitive	karhu-a	karhu-j-a	sinu-a	tei-tä
Essive	karhu-na	karhu-i-na	sinu-na	tei-nä
Translative	karhu-ksi	karhu-i-ksi	sinu-ksi	tei-ksi
Inessive	karhu-ssa	karhu-i-ssa	sinu-ssa	tei-ssä
Elicative	karhu-sta	karhu-i-sta	sinu-sta	tei-stä
Illative	karhu-un	karhu-i-hin	sinu-un	tei-hin
Adessive	karhu-lla	karhu-i-lla	sinu-lla	tei-llä
Ablative	karhu-lta	karhu-i-lta	sinu-lta	tei-ltä
Allative	karhu-lle	karhu-i-lle	sinu-lle	tei-lle
Abessive	karhu-tta	karhu-i-tta	sinu-tta	tei-ttä
Comitative	karhu-i-ne-		—	—
Instrumental	karhu-i-n		—	—

Conspicuously, the accusative singular of nouns is the only slot in the whole paradigm that has two endings. Their distribution is governed by “Jahnsson’s Rule”:

[2] JAHNSSON’S RULE (first, informal version)

Verbs which have no overt subjects govern the endingless accusative, verbs with overt subjects govern the *-n* accusative.

Exactly what it means for a verb to have no overt subject is a complicated matter that will occupy us in section 2.1.3. For now, compare the endingless object *karhu* of the imperative verb in [3a] with the *-n* marked object (*karhun*) in [3b]. *Sinut* is there to illustrate that pronouns always take *-t* accusatives.

- [3] a. Anna Mati-n näh-dä karhu / sinu-t!
Let(Imp) M.-Gen see-Inf bear-Nom / you-Acc
‘Let Matti see the(a) bear / you!’
- b. Matti anta-a häne-n näh-dä karhu-n / sinu-t.
M.-Nom let-3Sg him-Gen see-Inf bear-Acc / you-Acc
‘Matti will let him see the(a) bear / you.’

Recent work has completely upset this traditional view of the Finnish structural case system. Reviving an early proposal by Jahnsson 1871, many linguists now regard the so-called “endingless accusative” simply as a nominative (Timberlake 1974, Taraldsen 1985, Milsark 1986, Mitchell 1991, Maling 1993, Toivainen 1993, Vilkuna 1996, Nelson 1998). A minority fold the *-n* accusative with the genitive into one case (Penttilä 1963:149, Vilkuna 1989:7, Vainikka 1993²). Carlson 1978 on the contrary splits *-n* into three cases: genitive, accusative, and dative, the latter when it behaves as an inherent case, as in *Matin* and *hänen* in [3].

These views reflect, in part implicitly, the difference between single-level and multi-level case theories. In the next section we will begin to distinguish between them on empirical grounds.

1.3 Morphological case: coordination and agreement

1.3.1 The morphological system of structural cases

Taken by itself, morphology favors the paradigm in [4] for the structural cases, rather the textbook paradigm in [1].

²Vainikka 1993 further argues that the elative is also a structural case.

[4]

	‘bear’		‘he, they’	
	Singular	Plural	Singular	Plural
Nominative	karhu	karhu-t	hän	he
Accusative	—	—	häne-t	he-i-dä-t
Genitive	karhu-n	karhu-j-en	häne-n	he-i-dä-n
Partitive	karhu-a	karhu-j-a	hän-tä	he-i-tä

As a morphological paradigm, [4] is preferable to [1] for both conceptual and empirical reasons. [1] in effect amounts to treating $-\emptyset$ and $-n$ as suppletive allomorphs of accusative case, which is at odds with the fact that their distribution is determined *syntactically* by Jahnsson’s Rule. However exactly that generalization is formalized, it is not the sort of condition that should govern allomorphy, on the standard understanding of how morphology is organized. [4] rids the system of this unwanted syntactic conditioning of allomorphy.

Better still, [4] eliminates the entire $-t \sim -n \sim \emptyset$ allomorphy itself, a step all the more welcome because such suppletion (as opposed to systematic *morphophonological* alternation such as consonant gradation and vowel harmony) is uncommon in Finnish morphology.

[4] brings the endings and morphological cases closer to the ideal one-to-one correspondence in the other direction as well, by reducing the amount of case syncretism: all endingless case forms are now nominatives, and all $-n$ case forms are genitives; only $-t$ still has two functions.

Moreover, [4] avoids the coincidence that all three putative endings of the accusative in [1] are identical with the ending of another structural case.

This is not to say that suppletion and syncretism are impossible, or even that they must be avoided at all costs. Obviously they must be recognized wherever the facts demand it. The argument is just based on the premise that a morphological system is preferable in so far as it does not have them. Nor am I claiming that morphological alternations are a priori better dealt with in the syntax, merely that syntactic conditioning is evidence for morphemic status (as opposed to allomorphy, which should be dealt with within the morphology). The presumption therefore is in favor of treating the $-t \sim -n \sim \emptyset$ alternation in the syntax, or at the syntax-morphology interface, as an alternation between different morphological cases.

I will now provide syntactic arguments that the $-t \sim -n \sim \emptyset$ alternation indeed belongs in the syntax, and that the three endings mark distinct morphological cases which are contextually conditioned realizations of abstract accusative case. Even the remaining morphological complication in [4], the absence of accusative case in nouns, will be seen to follow from general case assignment constraints (section 3).

1.3.2 Endingless objects are morphologically nominative

A body of syntactic evidence that [4] rather than the traditional paradigm [1] gives the right morphological cases of Finnish comes from case parallelism between pronouns and nouns in coordination and agreement structures. In coordination, a shared argument must be assigned the same case by each of the conjoined predicates. A nominative subject then counts as parallel to a nominative (noun) object, but not to an accusative (pronominal) object (Vilkuna 1989:155).³

- [5] a. Mikko pyörty-i ja (Mikko) kanne-ttiin
 Mikko(**Nom**) faint-Past(3Sg) and (Mikko(**Nom**)) carry-Pass(3Sg)
 ulos.
 out
 ‘Mikko fainted and (Mikko) was carried out.’
- b. Hän pyörty-i ja *(häne-t) kanne-ttiin ulos.
 He(**Nom**) faint-Past(3Sg) and (he-**Acc**) carry-Pass(3Sg) out
 ‘He fainted and (he) was carried out.’

Case system [4] provides a simple explanation why the ellipsis in the second conjunct is allowed in [5a] but not in [5b]. Active verbs, such as *pyörtyi* ‘fainted’, assign nominative case to their sole argument. “Passive” verbs, such as *kannettiin* ‘was carried’, assign morphological nominative case to their sole overt argument if it is nominal (*Mikko*), and morphological accusative case if it is pronominal (*hänet*). The ellipsis in [5a] is grammatical because the shared argument *Mikko* gets nominative case from both verbs. The ellipsis in [5b] is ungrammatical because the shared argument gets morphological nominative case from the first verb, and morphological accusative case from the second verb. The case system [1] does not allow us to state the generalization this way, for according to it, *Mikko* and *hänet* as objects of *kannettiin* in [5] are both accusative. In that system, then, there would be no rationale for the contrast between [5a] and [5b].

A second argument for [4] over [1] is based on the interrogative pronoun *kuka* ‘who’. It has a unique suppletive case paradigm comprised of several stems (*ku-*, *ke-*, *kene-*), and allows both the nominal and the pronominal type of inflection in some cases. In particular, as the object of a passive or other subjectless verb it can be either nominative, like nouns and determiners, or accusative, like personal pronouns:

³Though Vilkuna’s generalization is surely correct (at least for formal registers), occasional exceptions do occur: *...kun vodkaa tuli vähän lisää, hän (Nom) kuukahti pöydän alle ja kannettiin ulos*. ‘When a little more vodka came, he slumped under the table and was carried out.’ (Arvo Tuominen, *Kremlin kellot*, 1956, p. 201).

- [6] Kuka näh-tiin? Kene-t näh-tiin?
 Who(**Nom**) see-PassPast who-**Acc** see-PassPast
 ‘Who was seen?’

When *kuka* agrees with a noun or adjective, however, the accusative is excluded. This situation arises in combinations such as *kuka muu* ‘who else’, or in the idiomatic *kuka kumma* ‘who on earth?’, literally ‘what strange one?’. [7] shows that only the nominative form can be the object of a passive verb.

- [7] a. Kuka kumma / kuka muu
 who(**Nom**) strange(**Nom**) / who(**Nom**) other(**Nom**)
 näh-tiin?
 see-PassPast
 ‘Who on earth was seen?’ ‘Who else was seen?’
- b. *Kene-t kumma / kene-t muu näh-tiin?
 who-**Acc** strange(**Nom**) / who-**Acc** other(**Nom**) see-PassPast
 ‘Who on earth was seen?’ ‘Who else was seen?’
- c. Ke-tä kumma-a / ke-tä muu-ta odotet-tiin?
 who-**Part** strange-**Part** / who-**Part** other-**Part** wait-for-PassPast
 ‘Who on earth was waited for?’ ‘Who else was waited for?’

According to [4], endingless nominals such as *kumma* in [7a] are nominative; hence *kuka kumma* and *kuka muu* in [7a] satisfy the requirement that the constituents of an NP must agree in case, just as *ketä kummaa* and *ketä muuta* as objects of the partitive-assigning verb *odottaa* ‘wait’ in [7c] do. [7b] is then ungrammatical simply because it violates case agreement. On the traditional scheme in [1], however, *kumma* and *muu* are “endingless accusatives”, hence have the same case as a pronominal accusative in *-n* and ought to agree with it, so that [7b] should be grammatical.

1.3.3 Objects in *-n* are morphologically genitive

The data so far considered show that endingless objects are morphologically nominative rather than accusative. A parallel argument shows that *-n* objects are morphologically genitive rather than accusative, contrary to the mixed case system proposed by most recent writers on Finnish syntax. Consider the same idiom as an object of a regular active verb:

- [8] a. Kene-n kumma-n hän näk-i?
 Who-**Gen** strange-**Gen** s/he see-PassPast
 ‘Who on earth did s/he see?’

- b. *Kene-t kumma-n hän näk-i?
 Who-Acc strange-Gen s/he see-Past
 ‘Who on earth did s/he see?’

According to [4] *kumman* is genitive, so the ungrammaticality of **kenet kumman* in [8b] follows from the case clash with accusative *kenet*. If *kumman* were accusative here, as per [1], then it should satisfy the case agreement requirement and its ungrammaticality would go unexplained.

A small class of epithets, such as *parka*, *raukka* ‘poor’, combine with both nouns and pronouns, including personal pronouns. Since personal pronouns, unlike the interrogative pronoun just discussed, strictly require the pronominal inflection, the corresponding case clash now causes an actual paradigmatic gap. Pronouns can combine freely with epithets in all cases except as “accusative” objects, as in [9c], where some speakers reject all combinations. This is just the case where it is impossible to satisfy simultaneously both agreement and the requirement that the pronoun be morphologically accusative and that the nonpronominal epithet be morphologically genitive. (The version marked with “?” is judged acceptable by some speakers and unacceptable by others.)

- [9] a. Minä parka joudu-i-n siivoa-ma-an.
 I(Nom) poor(Nom) get-Past-1Sg clean-Inf-Illat
 ‘Poor me ended up cleaning.’
- b. Minu-n para-n ol-i siivotta-va.
 I-Gen poor-Gen be-Past(3Sg) clean-Part
 ‘Poor me had to clean up.’
- c. ?He pan-i-vat minu-t para-n siivoa-ma-an. (*minu-t
 they(Nom) put-Past-3Pl I-Acc poor-Gen clean-Inf-Illat (I-Acc
 parka, *minu-n para-n)
 poor(Nom), I-Gen poor-Gen)
 ‘They made poor me clean up.’
- d. Minu-a raukka-a ei pääste-tty muka-an.
 I-Part poor-Part not(3Sg) let-PPP with-Ill
 ‘Poor me was not allowed to join.’
- e. Minu-lla rauka-lla ei ole mi-tään.
 I-Adess poor-Adess not(3Sg) be anything-Part
 ‘Poor me has nothing.’
- f. Mi-ten teidä-n raukko-j-en käv-i?
 what-Adv you-PlGen poor-PlGen go-Past(3Sg)
 ‘What happened to you poor people?’

No explanation for the peculiarity of [9c] is available under the assumption that *-n* and *-t* are the respective allomorphs of accusative case in nouns and pronouns.

The evidence discussed in this section shows that “taking morphology seriously” pays off in the syntax as well. The morphologically motivated case paradigm in [4] permits the formulation of two syntactic generalizations which are lost under the traditional system in [1], namely that coordinated NPs must agree in case, and that modifiers agree with their heads in case.

1.4 Abstract case

1.4.1 The need for abstract case

The textbook doctrine however fares much better as a theory of the *abstract* case categories of Finnish, which is of course why it was devised in the first place and why it remains useful in practical grammars. It recognizes an abstract accusative case realized by the endings $-\emptyset$, *-n*, *-t* in object function, and even informally makes a distinction between the genitive and dative functions of *-n*, referring to the latter as the “dative-genitive”.

Assigning the morphological categories of [4] directly would indeed be needlessly complex. Every rule or constraint that relates to accusative case would, if reformulated in terms of [4], have to repeat the three-way disjunction of nominative, genitive, and accusative case together with the conditions by which they are distributed. It is simpler to factor out these morphological alternations and to express the rules in terms of abstract accusative case, with the morphological realization of accusative case stated just once at the syntax-morphology interface.

In traditional Finnish grammar, abstract case is assigned on the basis of grammatical and semantic relations, and in turn spelled out by the appropriate endings. GB on the other hand reduces grammatical relations to abstract case defined in terms of configurational relations. Other modern grammatical theories, notably LFG, eliminate abstract cases as primitives, and map grammatical relations directly to morphological case. Each of these reductionist moves recognizes an important generalization about the organization of grammar, but each has its own problems too.

1.4.2 Morphological cases as realizations of grammatical relations

One difficulty with treating the assignment of structural case as a direct mapping from grammatical relations to morphological case is that even elements which do not bear any grammatical relation can bear structural case. The best-known

example is so-called default structural case, such as the nominative case assigned to left-dislocated and other syntactically isolated NPs (the *nominativus pendens* of classical grammar, see Schütze, this volume).⁴ Trickier to deal with is the fact that abstract accusative case is assigned to a class of adverbial measure phrases, which display the same $-n \sim \emptyset$ alternation conditioned by Jahnsson’s Rule as objects do, though they are not objects (Maling 1993). Moreover, like objects they get partitive case under negation (see [10c]).

- [10] a. Opiskel-i-n vuode-n.
 study-Past-1Sg year-**Gen**
 ‘I studied a year.’
- b. Opiskel-tiin vuosi.
 study-PastPass year-**(Nom)**
 ‘People/we studied a year.’
- c. E-n opiskel-lut vuot-ta-kaan.
 Not-1Sg study-PfP year-**Part**-even
 ‘I didn’t study even a year.’

These measure phrase adverbials are not complements by any other syntactic criterion, but must be adjuncts, as Hakulinen & Karlsson 1979:216 point out. In Finnish, a general constraint (“Siro’s Law”) prohibits more than one object in a VP. Measure adverbials however can co-occur with objects, and there can be several of them per clause. Unlike objects, they are immune to aspectual partitivity (section 2.1.4). Further, they neither raise nor allow predication of any sort, nor passivize:

- [11] Hölkkäs-i-n tunni-n. *Hölkkää-mä-ni tunti.
 jog-Past-1Sg hour-**Gen** jog-3Inf(**Nom**)-1SgPoss hour(**Nom**)
 ‘I jogged an hour.’ ‘The hour jogged by me.’

Let us add that abstract accusative cannot be assigned as default case, since Finnish has the abovementioned default nominatives as well. The conclusion is that structural case has other functions than marking grammatical relations, and that these functions are not restricted to default case marking.⁵

⁴For GB the corresponding dilemma is whether default case is purely morphological, or syntactically visible as abstract Case. Presumably it should be syntactically visible in order to allow syntactically isolated NPs to pass the Case Filter. On the other hand, it seems that visibility of default abstract case would nullify the effects of the Case Filter.

⁵This is not to say that the assignment of structural case to adjuncts is unconstrained. Maling 1993, citing A. Li, makes the interesting suggestion that structural case marks adverbs only as a last resort when there is no suitable semantic case in the language. See Wechsler and Lee 1996 for a theory of direct case assignment to adjuncts.

Even when it is possible to formulate rules that assign morphological case based on grammatical relations it may not be the right approach. In present linguistic theories, grammatical relations and morphological cases are formally unrelated categories. It is not clear how such theories can provide any intrinsic reason why any particular grammatical relation should be expressed by any particular morphological case. For example, why are there no cases that mark subjects and obliques (but not objects)? Cases are clearly not mere Saussurian tokens of difference that carve up the grammatical space in arbitrary ways.

1.4.3 Morphological case as spellout of abstract case

Theories that operate with abstract case are — at least in principle — in a better position to provide a principled solution to the “spellout” problem. For example, if abstract Nominative Case is taken to be the same category as morphological nominative case, defined at a different level of representation, the relation between them would be nonarbitrary, as desired. But the sense in which abstract “Nominative Case” and morphological “nominative case” are instantiations of the same category at different levels would have to be clarified. Just giving them the same name and spelling one with a capital letter is not a theoretical proposal but a pun. Another way to put it is that there needs to be some explanation for why particular Cases are assigned in particular syntactic positions. Moreover, there would have to be some account of the mismatches between the two levels, such as, in Finnish, nominative objects and genitive subjects.

In fact, the assumption that each abstract structural Case is assigned in a specific structural position has proved extremely difficult to implement in Finnish within standard varieties of GB. Recent analyses have been forced to weaken the theory by parametrizing the Case Filter and/or stipulating special conditions on both halves of Burzio’s generalization, or to posit otherwise unmotivated processes such as case assignment at both D-structure and at S-structure, movement of case-marked elements, movement of the case features themselves, or both. The following summaries of the most important of these proposals are merely a brief guide for the reader; space does not allow a full discussion of them here.

Mitchell 1991 proposes that nominative case is assigned to Specifiers of an intermediate functional category called PredP. It is morphologically realized as nominative-accusative case (i.e. as accusative with pronouns), by virtue of binding a trace in object position. From Spec(PredP) subjects can be raised to Spec(AgrP), where their nominative are “strengthened” by becoming coindexed with [+AGR]. Such a strengthened nominative is realized as morphological nominative case.

Vainikka (1993:158) treats objects in *-n* as having genitive case, which is

assigned to the subject in Spec-VP, gets stranded there when the subject is raised to Spec-IP, and then percolates down to the object. When there is no subject in Spec-VP and therefore no genitive assigned there, the object remains caseless (nominative, in traditional terms), except when it is a pronoun, in which case it is marked accusative.

Nelson 1998 (Ch. 4) lets nominative case be assigned by Tense/Mood either under Spec-head agreement or under government; when the verb does not license an external argument in spec-AgrP coindexed with AGR, an argument moves to a position where it can receive nominative case from Tense/Mood. She hypothesizes that the internal nominal argument of subjectless verbs is morphologically endingless because it is assigned abstract Case twice: nominative by Tense/Mood at S-structure, and accusative by the verb at D-structure (Burzio’s generalization being assumed to be inapplicable for pronouns in Finnish).

Taking a rather different tack within the same theoretical framework, Reime 1993 locates the case alternations at the morphology/syntax interface, where abstract accusative is spelled out as *-n* when a visibility requirement on PF interpretation requires an overt ending, otherwise as zero by the Principle of Full Interpretation.

1.4.4 The nominative as unmarked case

Reime’s invocation of PF visibility brings out an interesting functionality behind Jahnsson’s Rule which has been stressed in earlier work (Hakulinen & Karlsson 1979:186) but is obscured in solutions that seek to derive Jahnsson’s Rule from the interaction of case assignment with syntactic movement. This functionality comes out even more clearly in approaches which use a different syntactic toolkit, eschewing abstract case and letting morphological case be assigned directly in situ by context-dependent rules. A common feature of these solutions is the assumption that nominative case has a privileged status as the “elsewhere” case of Finnish.⁶

Using the case-in-tiers theory of Yip, Maling, and Jackendoff (1987), Maling 1993 derives Jahnsson’s rule from the principle that nominative case goes to the *highest available grammatical function* — to the subject if there is one (in which case the object gets accusative), and to the object otherwise. In Maling’s approach, case assignment is seen as the alignment of a case hierarchy with a hierarchy of grammatical functions. In a similar spirit, Toivainen 1993 postulates that nominative case is assigned to internal arguments just in case it cannot be assigned to the subject.

⁶Cf. on the GB side the proposal that nominative is not a case, but rather the absence of case (Milsark 1985, Taraldsen 1985, Vainikka 1993).

1.4.5 Main features of the present proposal

The present analysis has points of contact with much of this work. Like case-in-tiers theory, it exploits the *relational* character of structural case and the unmarked status of nominative case, without recourse to movement of case-bearing elements or case features, or stranding and percolation of case features. Like GB, it exploits the distinction between morphosyntactic case and abstract Case, though defining abstract case configurationally at the level of Semantic Form rather than at D-Structure or S-Structure. A key move is to treat the two levels of case as formally analogous, and the relation between them as one of realization, rather like that between underlying and phonetic representations in phonology. Structural case at each level is defined in terms of prominence relations, and these prominence relations are articulated by means of two features which cross-classify the cases into natural classes. This theory makes it possible to relate the morphologically and syntactically motivated case system in [4] to a well-defined set of abstract cases by the interaction of independently motivated constraints.

1.5 Case theory

1.5.1 The featural decomposition of case

The case theory sketched out in Kiparsky 1997 is designed to account for syntactic case marking and its relation to agreement and word order, for case morphology (e.g. patterns of neutralization and null affixation), for relation-changing (“A-movement”) processes such as passive, and in general for the relation between thematic roles and syntactic argument structure.⁷ Following Bierwisch and Wunderlich I assume that word meanings are propositional structures built from a fixed vocabulary of primitive constants and variables. Conceptual knowledge interfaces with syntactic structure at a level of Semantic Form where verbs are represented by expressions in which theta-roles are λ -abstractors over the variables in the function they denote (Bierwisch 1983, 1986, Bierwisch and Schreuder 1992). At Semantic form, the semantic role of the variable over which the lambda operator abstracts fixes the theta-role’s semantic content, and its depth of embedding fixes its place in the Thematic hierarchy. Structural case at all levels are defined by the cross-classifying relational features [\pm H(ighest) R(ole)] and [\pm L(owest) R(ole)].⁸

⁷See also Smith 1992/1996 for a development of an earlier version, and Wunderlich 1997, Joppen (this volume), Wunderlich & Lakämper (this volume) for important related work.

⁸This is comparable to the featural decomposition of grammatical functions by Bresnan & Kanerva 1989 and Alsina 1996 (respectively, [\pm r(estricted), \pm o(bject)] and [\pm subj, \pm obj]), building on Levin 1986. The features introduced here, however, are purely relational, and they apply also at the morphological level to define the inflectional case categories. The cross-

At the morphological level, case and agreement morphemes bear these features and assign them to the words that contain them. At the morphosyntactic level, these features are structurally assigned to syntactic constituents by their constituent words and by the syntactic positions they occupy. At the level of Semantic Form, they are structurally assigned to the hierarchically organized theta-roles to identify their abstract Case. Case assignment is here taken to be an optimal match between morphosyntactic and abstract case, governed by a set of universal correspondence constraints with a language-particular ranking.

1.5.2 Abstract case

The case features define an inventory of four abstract structural cases, or grammatical relations, for which I adopt Dixon’s mnemonic terms “A(gent)”, “S(ubject)”, “O(bject)”, and “D(ative)” (Dixon 1979), though their theoretical status here is not exactly the same as in Dixon’s theory.

[12] a. A:	Transitive Subject	[+HR, -LR]
b. S:	Intransitive Subject	[+HR, +LR]
c. D:	Higher (Indirect) Object	[-HR, -LR]
d. O:	Lower (Direct) Object	[-HR, +LR]

The Semantic Form of the verb *pane-* ‘put’, for example, has three theta-roles.⁹

[13] *pane-* ‘put’: $\lambda z\lambda y\lambda x$ [x CAUSE [BECOME [y AT z]]]

They are assigned abstract structural case features on the basis of their prominence. The highest theta-role λx (the Agent, or first argument of CAUSE) is [+HR, -LR], the lowest role λz (the location) is [-HR, +LR], and the middle role λy (the thing put) is [-HR, -LR].

In addition to these features, theta-roles bear a feature [\pm SC] which distinguishes those which are eligible for morphological licensing by structural cases from those which can only be licensed by oblique (semantic) cases, prepositions or positional case. For example, “demoted” theta-roles, such as the highest argument of passive predicates in English, are marked by the feature [-SC]. In Finnish, a VP can contain only one direct argument (either a subject or a direct object), which forces demotion of all but one internal theta-role to [-SC]. In *pane-* ‘put’ it is the result location which is [-SC], consequently receiving a directional locative case such as the allative or illative, rather than a structural

classification works for Finnish, although it does not reveal its full potential because Finnish lacks ergative case.

⁹I set aside the inflectionally bound event argument.

case. Since I will be concentrating on structural case assignment, I will omit specifications of $[\pm\text{SC}]$ unless they are specifically at issue, but it should be understood that every case feature matrix associated with a direct argument contains $[\text{+SC}]$.

At the level of abstract Case, the proposed decomposition into features makes it possible to individuate exactly the class of grammatical relations which play a role in syntactic constraints (such as binding, control, and, in some languages, parallelism in coordination). For example, the feature $[\text{+HR}]$ defines the relation of grammatical subject. The features also provide the appropriate representation on which valency-changing processes triggered by verb morphology operate in the lexicon.

1.5.3 Morphological and morphosyntactic case

The same features $[\text{HR}]$ and $[\text{LR}]$ also form the basis of the theory of morphological and morphosyntactic structural case. They are morphological features of structural case affixes and agreement affixes and thereby of the words that contain these affixes. At the level of morphosyntax, they are assigned to arguments by the morphological features of their heads and agreement relations, and by the structural positions they occupy. The morphosyntactic and morphological structural cases of Finnish are as follows.¹⁰

[14]	$-\emptyset$	nominative	$[\]$	(the unmarked case)
	$-(t)a$	partitive	$[-\text{HR}]$	(the unmarked complement case)
	$-t$	accusative	$[-\text{HR}, -\text{LR}]$	(the marked complement case)
	$-n$	genitive	$[\text{+HR}]$	(the specifier case)

The glosses give the intuitive content of each feature complex, though they will not be “true” of each occurrence because morphological cases, on the assumptions of the present proposal at least, are assigned by optimal matching to abstract case subject to a set of ranked violable constraints, not by inviolable unification.

Agreement and structural licensing positions assign morphosyntactic case as well. Subject agreement assigns nominative case to the agreeing argument. As for position, the feature values are associated with structural positions in the obvious way. The external argument position (Spec-IP, in English and Finnish) is $[\text{+HR}]$ (morphosyntactic nominative case), internal argument positions are $[-\text{HR}]$, and non-lowest internal argument positions are in addition $[-\text{LR}]$. Thus

¹⁰For the evidence that partitive is a structural case see Vainikka and Maling 1996 and Kiparsky 1998. The representation of genitive and partitive as respectively $[\text{+HR}]$ and $[-\text{HR}]$ corresponds to Vainikka’s 1993 insight that genitive is the default specifier case, and that partitive is the default complement case.

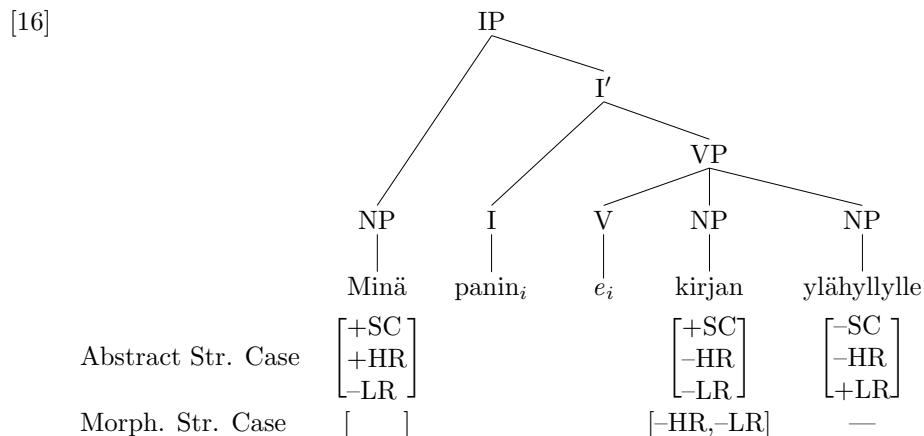
the feature $[\pm\text{HR}]$ in effect encodes the distinction between VP-internal and VP-external arguments (in this framework understood as a property of overt syntax, and not to be confused with the distinction between D-structure internal and external arguments that GB claims lies behind the unaccusative/unergative split). Thus, the first object position licenses the higher (dative, indirect) object and the second licenses the lower (accusative, direct) object. In Finnish, positional case is mostly redundant because morphological case suffices for licensing. Positional case plays an autonomous role only in licensing oblique possessors and experiencers as direct arguments, endowing them with some properties of grammatical subjects (section 2.4).

1.5.4 Case assignment

As an example of the way case is assigned, let us take the derivation of the sentence in [15].

- [15] Minä pan-i-n kirja-n ylähylly-lle.
 I(Nom) put-Past-1Sg book-Gen top-shelf-All
 ‘I put the book on the top shelf.’

The theta-roles receive abstract cases structurally as in [13]. The arguments to which these theta-roles are assigned receive morphological case in accord with the constraints governing the correspondence between abstract case and morphological case in Finnish.



Abstract case features function as constraints on morphosyntactic case. A theta-role’s abstract case must optimally match the argument’s morphosyntactic case. Because they are categorized by the same features, the relation between these two levels of representation can be established by general principles

with without any case-specific grammatical machinery. One-to-one correspondence between abstract case and morphological case comes free; grammatical constraints must do the rest.

In Kiparsky 1997, the main work of case assignment was done by Unification, understood as an inviolable constraint requiring that associated feature matrices be non-distinct, i.e. not have opposite values for any feature. This works for the simple case systems of Germanic languages, with the help of some underspecification (in particular, nominatives must be featureless). I have not found a good way of dealing with Finnish under those assumptions. Here I instead adopt an Optimality-theoretic approach in which the match is determined by best satisfaction of a ranked constraint system that includes two types of constraints: markedness constraints, which prohibit certain case features and combinations of case features, and Faithfulness constraints which minimize mismatches between abstract and morphosyntactic case features in both directions (MAX and DEP constraints).¹¹ Unlike Unification, satisfaction of Faithfulness constraints is gradiently defined, in terms of the number of feature mismatches between the abstract case feature matrix and the morphosyntactic case feature matrix. This becomes important because of a second point of difference, that constraints are violable, and that violations of Faithfulness may be forced by higher-ranked constraints. In such cases, the Faithfulness constraints will select the *minimal* violation that is consistent with those higher-ranked constraints. The fact that mismatches are minimized rather than forbidden shifts the burden from the representations to the constraints and makes underspecification less important. A benefit of OT is that the constraints interact to derive generalizations about inflectional morphology and word order, and about their interrelationship, amounting to a typology of morphosyntactic licensing (“linking”).

Independently of the evidence for the morphological case system in [4], this approach is favored by three sorts of syntactic arguments. First, it explains the case alternations as reflexes of universal syntactic constraints that govern split structural case assignment in general, including, most famously, the phenomenon of split ergativity.¹² Secondly, it contributes to an understanding of some otherwise difficult syntactic phenomena of Finnish, such as existential sentences, the *necessive* construction, the “dative-genitive”, and anaphora. Third, it helps reconcile the Finnish data with the view that predicate argument structure is derivable from lexical semantics.

¹¹The correspondence theory proposed for phonology (McCarthy and Prince 1995) has MAX and DEP constraints for segment correspondence and bidirectional IDENT constraints for feature correspondence. Here we will require MAX and DEP constraints for feature correspondence.

¹²See Itkonen 1974, 1975a and Nelson 1998 for different proposals to relate syntactic phenomena of Finnish to ergative languages.

1.5.5 The problematic nature of abstract case in Finnish

Developing these arguments will require untangling the abstract cases of Finnish, that is, the fundamental grammatical relations, which are, if anything, even more controversial than the identity of its structural cases. Subjects and objects in Finnish stand in a many/many correspondence both to theta-roles and to the structural positions of the arguments to which they are assigned. VP-internal arguments can have any theta-role, including the Agent of verbs like “work”. The subject of a class of intransitive verbs can be either an external argument or an internal argument. Direct objects come in two varieties, which are positionally indistinguishable from internal subjects, but structurally quite different.

In the face of these problems, some Finnish linguists have begun to operate with a third grammatical relation they call a *ject*, defined as a neutralization of the subject and object relations (Karlsson 1982, Vilkuna 1989:156). Laitinen and Vilkuna (1993:41) distinguish as many as four degrees of subjecthood, and descriptively speaking there are still more of them as we shall see. Vilkuna (1989) concludes that declarative sentences contain a “pivot” position which normally contains the grammatical subject if there is one, otherwise an oblique or adverbial, and under certain textually marked conditions houses a topic instead, or remains empty. On syntactic grounds this position can be identified as the Specifier of IP.

Thus, Finnish threatens to wreck the twin projects of identifying grammatical relations with structural positions (Chomsky 1981) and of deriving the syntactic prominence of arguments — whether represented by a hierarchy of grammatical relations, configurationally, by a SUBCAT list, or in some other way — from the prominence of their semantic roles (Dowty 1979, 1991, Givón 1984, Ch. 5, Foley and van Valin 1984, Bierwisch 1986, Bresnan and Kanerva 1989, Jackendoff 1990, Pollard and Sag 1994).

I shall attempt at least a partial rescue here. I believe I can show that the “four degrees of subjecthood” are epiphenomenal and arise from the fact that some subject diagnostics relate only to abstract case and others to morphosyntactic case, for reasons that can (at least in part) be explained. Where the highest theta-role is not assigned to an external argument, and where the apparently lowest theta-role seems to be more prominent syntactically than it should be, there are in each case clearly identifiable semantic factors at work, even though it is not always clear exactly how they pre-empt the expected argument positions. At any rate, the different types of subjects and objects arise from mismatches between abstract case and position under conditions which can be precisely characterized and to some extent motivated.

2 Clause types

Four core sentence types of Finnish are of interest here:

- sentences with external subjects (basic sentences),
- sentences with internal nominative or partitive subjects (existential sentences),
- sentences with no subjects (all passives in Finnish belong here),
- sentences with oblique subjects (possessive and neccessive sentences).

In this section I discuss these four types in turn.

2.1 The basic sentence

2.1.1 External arguments

External arguments are canonical subjects. They have nominative case and agree with the verb, unless it is impersonal or nonfinite, in which case they have genitive case. Normally they appear preverbally in a position which can be syntactically identified as Spec-IP, but other word orders arise by topicalization and focusing, as in [17b,c,d].¹³

- [17] a. Sotilaa-t tuhos-i-vat tämä-n kylä-n.
soldier-PlNom destroy-Past-3Pl this-Gen village-Gen
'(The) soldiers destroyed this village.'
- b. Tämä-n kylä-n tuhos-i-vat sotilaa-t.
this-Gen village-Gen destroy-Past-3Pl soldier-PlNom
'As for this village, it was (the) soldiers who destroyed it.'
- c. Tämä-n kylä-n sotilaa-t tuhos-i-vat.
this-Gen village-Gen soldier-PlNom destroy-Past-3Pl
'As for this village, (the) soldiers destroyed it.'
- d. Sotilaa-t tämä-n kylä-n tuhos-i-vat.
soldier-PlNom-3Pl this-Gen village-Gen destroy-Past
'It was (the) soldiers who destroyed this village.'

¹³See Vilkuna 1989 for a thorough study of the grammar of Finnish word order.

These processes, and \bar{A} -movement in general, do not seem to interact with licensing, and will not be further discussed here. The licensing position will be assumed to be the gap in the clause which is bound by the \bar{A} -moved element.

External subjects typically receive a ‘strong’ construal, i.e. a definite, specific, or generic reading, but indefinite readings are also possible under certain conditions. The subject in [17] is systematically ambiguous between a definite and an indefinite reading. On the other hand, the external subject of an intransitive sentence such as *Sotilaat tulivat* ‘The soldiers came’ is just about obligatorily definite. To express the corresponding indefinite meaning, the existential construction with an internal subject is used instead.

The following tentative generalization holds for Finnish, at least as a first approximation: an external subject cannot be indefinite if it can be made an internal argument, i.e. if the sentence can neither be paraphrased as a passive nor as an existential sentence. In other words, external subjects are indefinite only when there is no alternative. For example, Finnish has no personal passives with an agent phrase. So, whereas in [17a], the most felicitous English expression of the indefinite subject reading is the passive (‘This village was destroyed by soldiers’), such a passive is not possible in Finnish. Finnish also has no transitive existential sentences. Thus, the syntax does not provide any way to maneuver a transitive subject into internal position. Therefore it must be external as a last resort, even if that means violating the constraint requiring that external subjects be definite. This kind of interaction can be modeled by ranked constraints in the obvious way.

The case properties of external subjects are straightforward. They bear the abstract case feature [+HR], and are licensed by the morphosyntactic case features borne by morphological nominative case, by agreement, and by the Spec-IP position, which is [+HR]. This is the optimal match between abstract case and morphosyntactic case, which will prevail unless some higher-ranked constraint prevents it.

2.1.2 Object case marking

Direct objects in Finnish are of two types, which are respectively governed by aspectually bounded and unbounded verbal predicates. Traditionally they are called resultative and irresultative objects, but since resultativity is only one type of aspectual boundedness I prefer the more non-committal terms *R-objects* and *I-objects*.

The class of bounded predicates, which take R-objects, comprises all telic (“resultative”) predicates, such as [18a], plus a subclass of atelic predicates, mainly verbs of perception, knowing, possession, and containment (“quasi-resultative predicates”, as Itkonen 1974 calls them), of which a sample is given in [18b].

- [18] a. *ostaa* ‘buy’, *ottaa* ‘take’, *pudottaa* ‘drop’, *suorittaa* ‘carry out’, *kadottaa*, *menettää* ‘lose (possession)’, *hävitä* ‘lose (game, fight)’, *löytää* ‘find’, *hyväksyä* ‘accept’, *panna* ‘put’, *asettaa* ‘place’, *tappaa* ‘kill’, *antaa* ‘give’, *kaataa* ‘fell’, *mainita* ‘mention’, *siepata* ‘catch’, *omak-sua* ‘appropriate, internalize’, *ripustaa* ‘hang’, *istuttaa* ‘plant’.
- b. *tuntea* ‘know’ (‘connaître’), *tietää* ‘know’ (‘savoir’), *ymmärtää* ‘understand’ (but unbounded in the sense ‘have an understanding of, have sympathy for’), *myöntää* ‘acknowledge’, *katsoa* ‘regard, consider’ (unbounded in the sense ‘look at’), *oivaltaa* ‘realize’, *uskoa* ‘believe’ (something), *nähdä* ‘see’, *kuulla* ‘hear’, *huomata*, *havaita*, *keksiä* ‘notice’, *omistaa* ‘own’, *sisältää* ‘contain’, *käsittää* ‘comprehend, comprise’, *muistaa* ‘remember, recall’ (unbounded in the sense ‘think of, commemorate’).

It is assumed that these two verb classes can be unified in terms of a semantic category of boundedness, though the characterization of boundedness remains elusive.

Here are the descriptive generalizations about morphological case on objects. If they seem complex, the reader should take heart: examples and explanations will follow.

I-objects are always partitive. R-objects are partitive only if at least one of the two conditions in [19] holds:

- [19] a. they are in the scope of sentence negation, or
 b. they have a quantitatively indeterminate denotation.

Otherwise R-objects are case-marked in accord with [20]:¹⁴

- [20] a. Personal pronouns are accusative.
 b. Singular NPs are genitive in the domain of a properly licensed subject. The domain includes nonfinite infinitive complements, and optionally participial complements. For the definition of PROPERLY LICENSED see below.
 c. All other NPs (i.e. plural NPs, and singular NPs not in the domain of a properly licensed subject) are nominative.

For example, the R-object of the bounded predicate *tuo-* ‘bring’ in [21] is marked accusative if it is a pronoun (e.g. [21a] *hänet*), genitive if it is a singular noun and there is a subject ([21a] *karhun*), and nominative otherwise ([21a,c] *karhut*, *karhu*). The bare plural object *karhuja* ‘bears’ in [21b,d] is partitive by case [19b] (quantificational partitivity).

¹⁴Here as elsewhere I assume the case system in [4].

- [21] a. Tuo-n häne-t / karhu-n / karhu-t.
bring1Sg he-**Acc** / bear-**Gen** / bear-Pl**Nom**
‘I’ll bring him/her / the (a) bear / the bears.’
- b. Tuo-n *hän-tä / *karhu-a / karhu-j-a.
bring1Sg you-**Part** / bear-**Part** / bear-Pl-**Part**
‘I’ll bring him/her / the (a) bear / bears.’
- c. Tuo häne-t / karhu / karhu-t!
bring1Sg he-**Acc** / bear(**Nom**) / bear-Pl**Nom**
‘Bring him / the (a) bear / the bears!’
- d. Tuo *hän-tä / *karhu-a / karhu-j-a!
bring1Sg he-**Part** / bear-**Part** / bear-Pl-**Part**
‘Bring him / the (a) bear / bears!’

In the present analysis, R-objects and I-objects are assigned different abstract case, respectively $[-\text{HR}, -\text{LR}]$ and $[-\text{HR}, +\text{LR}]$. Given the above case features, the features of I-objects fall out directly from the assignment of abstract case; hence partitive objects are the unmarked type of object for a normal transitive verb. R-objects must receive the feature $[-\text{HR}, -\text{LR}]$, i.e. they are structurally more prominent. By assumption, this feature must be structurally assigned; the structure that assigns it can itself be semantically motivated, however (section 2.1.4).

2.1.3 Nominal R-objects: Jahnsson’s Rule

Setting aside pronominal case-marking for now (we will get back to it later) let us concentrate on the case marking patterns of nominal R-objects. By [20b,c], singular nominal objects are genitive if they are governed by a verb that has a properly licensed subject, and otherwise nominative. By a PROPERLY LICENSED SUBJECT I mean one which bears morphological structural case, and which agrees with the verb if it can, which is to say if it is an external nominative subject.

The data in [22] illustrate the main types of cases where there is no properly licensed subject and where nominal R-objects are consequently nominative. They are: bare infinitives ([22a]), first and second person imperatives ([22b]), and “passives” ([22c]), including colloquial 1Pl morphological “passives” ([22d]).

- [22] a. Näh-dä Napoli ja kuol-la.
see-Inf Naples(**Nom**) and die-1Inf
‘To see Naples and to die.’
- b. Näe Napoli!
see-Imp Naples(**Nom**)
‘See Naples!’

- c. Näh-tiin-kö Matti / sinu-t?
 see-Pass-Past-Q Matti(**Nom**) / you-**Acc**
 ‘Was Matti seen? Were you seen?’
- d. Me näh-tiin Matti / sinu-t.
 We(**Nom**) see-Pass-Past Matti(**Nom**) / you-**Acc**
 ‘We saw Matti. We saw you.’ (colloquial)

The rest of this subsection is devoted to some of the hairier details connected with Jahnsson’s Rule, which readers not particularly interested in Finnish may wish to skip.

Genitive subjects of complements headed by nonfinite verbs also count as properly licensed subjects, since they bear structural genitive case. These genitive subjects are in fact external subjects: if they were internal subjects they would remain nominative (see [47] below). Thus, *sinun* in [23] is a properly licensed subject, and therefore the object *karhun* is assigned genitive case (rather than nominative case).

- [23] Tä-ssä luul-laan sinu-n ampu-nee-n karhu-n.
 here suppose-Pass you-**Gen** shoot-PfP-Gen bear-**Gen**
 ‘Here you are believed to have shot a bear.’

The genitive case on the subject of nonfinite complements like [23] is a structural case. We can say that it is assigned structurally because it does not depend on the subject’s theta-role or on the lexical identity of the verb, just on the verb’s nonfinite morphology. These structural genitive subjects of infinitives contrast with the ‘quirky’ genitives assigned by adjectives, such as those in [24], which depend on the particular lexical item. For example, the adjective *tärkeä* ‘important’ would assign allative case rather than genitive case. Unlike genitive subjects with structural case, genitive subjects with non-structural case (quirky genitive subjects) allow nominative case on the object:

- [24] Sinu-n on helppo ampu-a tämä karhu.
 You-Gen be(3Sg) easy shoot-1Inf this(**Nom**) bear(**Nom**)
 ‘It is easy for you to shoot this bear.’

As stressed by Timberlake 1974, it is not just the actual presence of an *overt* subject that is relevant for object marking. The object is case-marked even when there is no overt preverbal subject as long as there is subject-verb agreement and there *could* be a lexical subject in Spec-IP position (without other changes in the sentence). I assume that such “potential subjects” are diagnostic of phonologically empty but syntactically visible subjects or subject positions. “Pro-drop” is a simple case in point. First and second person pronouns in

Finnish are optional (see [25a,b]); in the literary language their use implies some emphasis or contrast. Also, third person *pro* is silent in the generic or “missing persons” construction illustrated in [25c] (Hakulinen and Karlsson 1973), but overt generic expressions such as *kuka tahansa* ‘anyone’ or *ihminen* ‘a person’ could take its place without further change in form or meaning. In these cases, the verb shows agreement in the appropriate number and person, and the covert subject is visible for syntactic processes such as control and anaphora. It also triggers genitive case marking of R-objects.

- [25] a. Me nä-i-mme Napoli-n / sinu-t.
 we(Nom) see-Past-1Pl Naples-**Gen** / you(Sg)-**Acc**
 ‘We saw Naples / you.’ (nominative subject and agreement)
- b. Nä-i-mme Napoli-n / sinu-t.
 See-Past-1Pl Naples-**Gen** / you(Sg)-**Acc**
 ‘We saw Naples / you.’ (pro-drop, agreement)
- c. Sie-ltä näke-e Napoli-n / sinu-t.
 there-Abl see-3Sg Naples-**Gen** / you(Sg)-**Acc**
 ‘You (can) see Naples /you from there.’ (generic *pro*, agreement)

These cases may be contrasted with [22d], where the subject, though it seems to be an external argument, does not agree with the verb, hence is not properly licensed as defined here.

1/2P imperative sentences may have optional overt pronominal “subjects”, yet function consistently as subjectless sentences for purposes of the case marking of objects and measure phrases. There are indications that these pronouns are not properly licensed subjects in an agreement relation with the imperative verb. First, unlike *pro*, they can be replaced by full nouns, still keeping the 2nd person verb inflection, e.g. [26a].¹⁵ This suggests that there is no true agreement relation here. Secondly, they are obligatorily postverbal, e.g. [26b,c], even in the 1Pl imperative use of the passive (see [26d]), where the pronoun precedes in the declarative, yet they cannot be internal subjects because they occur with all verbs including transitives. The contrast with 3P imperatives is instructive here (Carlson 1978). As [26e] shows, while 3P imperatives also share this pattern, they in addition allow an agreeing nominative subject in Spec-IP, and correspondingly they also trigger genitive case on the object.

- [26] a. Näh-kää (te / poja-t) Napoli! Men-nään
 see-Imp-2Pl (you(PlNom) / boy-PlNom) Naples(**Nom**) Go-Pass
 poja-t Napoli-in!
 boy-PlNom Naples-Illat

¹⁵They have been considered a type of vocative (Toivainen 1993), but if so they would have to be a very special kind of vocative because unlike ordinary vocatives they can be first person, and take the clitic *-kin* ‘also’.

- ‘You (guys) see Naples!’ ‘Let’s go to Naples, guys.’
- b. Nāe (sinä) Napoli! *Sinä nāe
 see-Imp (you(Nom)) Naples(**Nom**) you(Nom) see-Imp
 Napoli!
 Naples(**Nom**)
 ‘(You) go ahead and see Naples!’ ‘*You* see Naples!’
- c. Nāh-kää-mme (me-kin) Napoli! *Me-kin
 see-Imp-3Pl (we(Nom) too) Naples(**Nom**) we(Nom) too
 nāh-kää-mme Napoli!
 see-Imp-3Pl Naples(**Nom**)
 ‘Let’s (us too) see Naples!’
- d. Nāh-dään me-kin Napoli! *Me-kin
 see-Pass (we(Nom) too) Naples(**Nom**) we(Nom) too
 nāh-dään Napoli!
 see-Pass Naples(**Nom**)
 ‘Let’s (us too) see Naples!’
- e. Nāh-kööt (he) Napoli-n! He nāh-kööt
 see-imp-3pl (they(Nom)) Naples-**Gen** they(Nom) see-imp-3pl
 Napoli-n!
 Naples-**Gen**
 ‘Let them see Naples!’

The upshot is that imperatives, though their syntax is puzzling in many ways, if anything confirm the validity of the generalization. This is important because imperatives are apparently the core environment of nominative objects in the Balto-Finnish languages (Grünthal 1941) and in some unrelated languages as well.¹⁶

The case alternation between nominative and accusative singular nominal objects emerges from the interaction of a special constraint with the general constraints on case assignment. To formulate the special constraint, we define a PIVOT as the highest direct argument that can be expressed (in the sense explained above):

[27] DEF: X is a pivot iff

- a. X is [+SC], and
- b. no realizable thematically higher argument is [+SC]

¹⁶In Hopi, “Nominative is the case of the subject, *noun*-object of an imperative transitive verb, vocative ...” “Objective is the case of the direct object of transitive verbs (except in imperative ...)” (Whorf 1946:168). And in Lardil, “in imperatives, the direct object lacks *-intha* if it is third person, although if first person it takes that case...” (Klokeid 1978).

Jahnsson’s Rule can then be stated as [28]:

[28] Jahnsson’s Rule (JR):

NP- \emptyset must be a pivot.

A general constraint, $*[\alpha F]$, states that everything gets nominative case (this is equivalent to saying that nominative is the “elsewhere” case of the language). It is dominated by the special constraint [28], which in effect precludes *morphologically endingless* arguments, i.e. nominative singulars, after “real” subjects. Narrowing down the problem to the choice between genitive and nominative in nominal R-objects, we obtain the correct distribution by the ranking $JR \gg *[\alpha F]$. The adverbial cases work the same way, if we continue to suppose as before that they bear structural case even though they have no theta-role (see items 5 and 6 in [29]). Here, then, is what we have so far. The complete tableaux will be supplied later.

[29]

Jahnsson’s rule		...	JR	* αF	...
([+HR,–LR]) [–HR,–LR]: ‘bring the bear!’					
1a.	tuo karhu-n [+HR] (Gen.)			*	
1b.	☞ tuo karhu- \emptyset [] (Nom.)				
([+HR,–LR]) [–HR,–LR]: ‘bring the bears!’					
2a.	tuo karhu-n [+HR] (Gen.)			*	
2b.	☞ tuo karhu-t [] (Nom.)				
([+HR,–LR]) [–HR,–LR]: ‘I’ll bring the bear’					
3a.	☞ tuon karhu-n [+HR] (Gen.)			*	
3b.	tuon karhu- \emptyset [] (Nom.)		*		
([+HR,–LR]) [–HR,–LR]: ‘I’ll bring the bears’					
4a.	tuon karhu-n [+HR] (Gen.)			*	
4b.	☞ tuon karhu-t [] (Nom.)				
([+HR,–LR]) [–HR,–LR]: ‘wait a year!’					
5b.	odota vuode-n [+HR] (Gen.)			*	
5c.	☞ odota vuosi- \emptyset [] (Nom.)				
[+HR,–LR] [–HR,–LR]: ‘I waited a year’					
6a.	☞ odotin vuode-n [+HR] (Gen.)			*	
6b.	odotin vuosi- \emptyset [] (Nom.)		*		

Weather verbs such as *sataa* ‘it is raining’ are another potentially troublesome case for Jahnsson’s Rule. They routinely have a partitive object, e.g. *sataa vettä* ‘it is raining’, *sataa lunta* ‘it is snowing’, *sataa rakeita* ‘hail is falling’, literally something like ‘it precipitates water (snow, hail)’ (quantitative partitivity).

But the object is sometimes quantitatively determinate, and then it turns out to be genitive, not nominative as would be expected for subjectless verbs:

- [30] Joulu-ksi sato-i pysy-vä-n lume-n.
 Christmas-Transl fall-Past(3Sg) stay-Prt-**Gen** snow-**Gen**
 ‘For Christmas, there fell a permanent (amount of) snow.’

A closer look suggests that weather verbs do have a licensed thematic subject position, as the genitive case-marking on the object implies. For all of them can have overt lexical subjects, as in [31b,c]:¹⁷

- [31] a. Pilvi sata-a vet-tä.
 cloud(-Nom) rain-3Sg water-Part
 ‘The cloud is raining (water).’ (e.g. as opposed to snowing)
- b. Taivas o-n sata-nut kaike-n lume-nsa.
 sky(-Nom) be-3Sg rain-PfP all-Gen snow(Gen)-3Sg
 ‘The sky has precipitated all its snow.’

While infrequent, these constructions with overt subjects are perfectly grammatical. With other weather verbs they occur more frequently, e.g. (*aurinko*) *paistaa* ‘it (the sun) is shining’, (*lumi*) *pyryää* ‘there is a blizzard’. Moreover, many ordinary verbs can function as weather verbs, e.g. *tulee lunta* (*tulee* ‘comes’), *heittää lunta* (*heittää* ‘throws’), and this whole group seem to belong to a larger class of optionally impersonal verbs, which include verbs like *vilistä* ‘teem’, *tykyttää* ‘throb’.

The upshot of all this are the following two conclusions:

- [32] a. The subject position in Finnish is morphosyntactically eliminated only as a result of special morphology (passives and imperatives).
- b. Pivots for purposes of Jahnsson’s Rule are potential (empty but realizable) external subjects, as well as actually realized subjects. They include the subjects of weather verbs, and generic 3rd person subjects.

Now we come to what is probably the most interesting aspect of Jahnsson’s Rule: the case marking of noun objects shows an *unbounded long-distance dependency*. If the matrix clause has a pivot, then a singular noun object of an infinitive complement is genitive whether the infinitive has a subject or not. This genitive object marking extends obligatorily down through a chain of such infinitive complements. In other words, nominative objects must be pivots within

¹⁷Examples [30] and [31] are from the *Nykysuomen Sanakirja* dictionary.

their entire finite clause. The same long-distance effect shows up in participial complements, but there it is optional: a subjectless participial complement *may* have a genitive singular noun object even if there is no subject in any higher clause.¹⁸ But if genitive case is assigned to the object of a participial complement, the objects in all participial and infinitive complements below it must be genitive as well. Thus, [33a] has a downstairs genitive object and measure phrase respectively, because the subordinate clause itself has a properly licensed subject (genitive *sinun*), and the [33b,c] have a downstairs genitive object because the main clause has a properly licensed subject (the *pro* subject ‘we’).

- [33] a. Luul-laan sinu-n suoritta-nee-n korvaukse-n.
 suppose-Pass you-Gen make-PfP-Gen compensation-**Gen**
 ‘You are believed to have paid compensation.’
- b. Sii-tä luule-mme suorite-tu-n korvaukse-n.
 it-Part suppose-1Pl perform-PPP-Gen compensation-**Gen**
 ‘We believe compensation to have been paid for it.’
- c. Halus-i-mme yrittä-ä juos-ta kilometri-n kahde-ssa
 want-Past-1Sg try-Inf run-Inf kilometer-**Gen** two-Iness
 minuuti-ssa.
 minute-Iness
 ‘We wanted to try to run a kilometer in two minutes.’

In contrast, the sentences in [34] have nominative objects and measure phrases in the lowest clause because none of their verbs has a thematic subject.¹⁹

- [34] a. Sii-tä luul-laan suorite-tu-n korvaus.
 it-Part suppose-Pass perform-PPP-Gen compensation(**Nom**)
 ‘Compensation is believed to have been paid for it.’
- b. Sii-tä luul-laan voi-ta-va-n suoritta-a
 it-Part suppose-Pass can-Pass-Part-Gen perform-Inf
 korvaus.
 compensation(**Nom**)
 ‘Compensation is believed to be able to be paid for it.’
- c. Halut-tiin yrittä-ä juos-ta kilometri kahde-ssa
 want-PastPass try-Inf run-Inf kilometer(**Nom**) two-Iness
 minuuti-ssa.
 minute-Iness
 ‘People/we wanted to try to run a kilometer in two minutes.’

¹⁸Participial complement clauses are optional islands with respect to negational partitivity and extraction as well.

¹⁹While these sentences are all grammatically correct, the longer ones are stylistically clumsy; I have made them up to dramatize the unbounded character of the phenomenon.

- d. Ilmen-i väite-ty-n
 become-apparent-Past(3Sg) allege-PassPart-Gen
 luul-lu-n voi-ta-va-n suoritta-a
 think-PassPart-Gen can-Pass-Inf-Gen perform-Inf
 korvaus.
 compensation(**Nom**)
 ‘It became apparent that it had been claimed to have been thought
 that compensation could be paid.’

These long-distance effects follow if we assume that the case marking constraints hold within the domain of a finite clause.

2.1.4 Partitive objects

The second type of direct object, the I-object, occurs with predicates which denote an activity of indeterminate extent, such as “seek” in [35]. An I-object, whether nominal or pronominal, is partitive regardless of its denotation. Here partitive case marks the aspectual *unboundedness* of the VP.

- [35] a. Etsi-n *sinu-t / *karhu-n / *karhu-t.
 seek-1Sg you-**Acc** / bear-**Gen** / bear-Pl**Nom**
 ‘I’m looking for you / the (a) bear / the bears’
 b. Etsi-n sinu-a / karhu-a / karhu-j-a.
 seek-1Sg you-**Part** / bear-**Part** / bear-Pl-**Part**
 ‘I’m looking for you / the (a) bear / (the) bears’

A sampling of such unbounded predicates is given in [36].²⁰

- [36] *halveksia* ‘despise’, *ihailla* ‘admire’, *ikävöidä* ‘yearn for’, *harrastaa* ‘be interested in (as a hobby)’, *huvittaa* ‘amuse’, *ikävystyttää* ‘bore’, *inhota* ‘feel revulsion towards’, *kadehtia* ‘envy’, *karttaa* ‘avoid’, *kehua*, *ylistää* ‘praise’, *kiinnostaa* ‘interest’, *kiittää* ‘thank’, *kunnioittaa* ‘honor’, *moittia* ‘blame, reprimand’, *onnitella* ‘congratulate’, *pelätä* ‘fear’, *rakastaa* ‘love’, *sietää* ‘tolerate’, *siunata* ‘bless’, *toivoa* ‘hope for’, *valittaa* ‘complain about’, *vihata* ‘hate’, *koettaa*, *yrittää* ‘try’, *pyytää* ‘ask for’, *merkitä*, *tarkoittaa* ‘mean’, *ajatella*, *pohtia* ‘think about’, *harkita* ‘consider’, *matkia* ‘imitate’, *paeta* ‘flee’, *kysyä* ‘ask for’, *heiluttaa* ‘swing back and forth’, *ravistaa* ‘shake’, *keinuttaa* ‘rock’, *koskettaa* ‘touch’.

²⁰When these verbs are used with an explicit resultative predicate, they do get a resultative object; below we will find out why.

A large number of verbs are aspectually ambivalent, allowing both a bounded reading and an unbounded reading, with concomitant syntactic alternation between R-object and I-object. For example, *ampua* ‘shoot’ is both unbounded (‘shoot at’, with an I-object) and bounded (‘shoot at and hit’, with an R-object).

Previous studies have tied the distinction between partitive and “accusative” objects directly to the aspectual properties of the verb (or of some verbal projection). Vainikka 1993:142 assumes that all instances of accusative case are triggered by a feature [+COMPLETED] on the governing verb, and that partitive cases is assigned when this feature is not present. A solution along these lines would be easy to implement in the present framework as well. However, as stated it constitutes a purely descriptive solution which provides no principled reason why accusative and partitive are distributed in this way. The feature [COMPLETED] is really a placeholder for the actual semantic property responsible for accusative case.

Nelson 1998:148 ff. proposes that partitive case is associated with assignment of a non-aspectual theta-role (θ_{mod}), while accusative case is associated with assignment of aspectual theta-roles, both by V at D-structure. I shall explore a solution along these lines, which derives the thematic difference from Semantic Form. The proposal is that R-objects occur when the predicate denotes a complex event. In particular, R-objects occur when the predicate has an extra resultative theta-role, which may be overtly expressed as a resultative predicate. Two basic generalizations add a measure of support for this interpretation of the syntactic distinction between R-objects and I-objects: bounded verbal predicates only have R-objects, and verbs with overt resultatives only have R-objects (i.e. they are not partitive except when quantification and negation require it).

- [37] a. Ammu-i-n karhu-n / karhu-a.
 shoot-Pst-1Sg bear-**Gen** / bear-**Part**
 ‘I shot the (a) bear / I shot at the (a) bear.’
- b. Ammu-i-n karhu-n / (*karhu-a) kuoliaa-ksi.
 shoot-Pst-1Sg bear-**Gen** / bear-**Part** dead-Transl
 ‘I shot the (a) bear dead.’ (OK: ‘I was in the process of shooting the (a) bear dead.’)
- [38] a. Heit-i-n ikkuna-a kive-llä.
 throw-Past-1Sg window-Part rock-Adess
 ‘I threw the (a) rock at the (a) window.’
- b. Heit-i-n ikkuna-n kive-llä rikki.
 throw-Past-1Sg window-Gen rock-Adess broken
 ‘I broke the (a) window by throwing the (a) rock at it.’

- c. Heit-i-n kive-n ikkuna-an.
 throw-Past-1Sg rick-**Gen** window-Ill
 ‘I threw the (a) rock into the (a) window.’

Transfer predicates and privative predicates also take R-objects (rather than I-objects) as their one direct object argument.

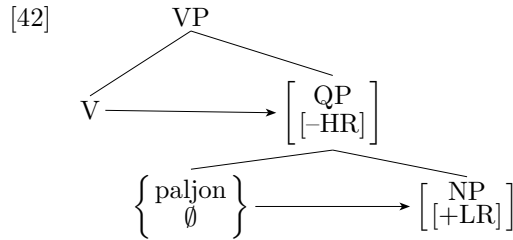
- [39] a. Lääkäri kiels-i häne-ltä kahvinjuonni-n.
 doctor(Nom) forbid-Past(3Sg) he-Abl coffee-drinking-**Gen**
 ‘The (a) doctor forbade him the drinking of coffee.’
 b. Lääkäri lupas-i häne-lle resepti-n.
 doctor(Nom) promise-Past(3Sg) he-All prescription-**Gen**
 ‘The (a) doctor promised him the (a) prescription.’

The hypothesis that R-objects are associated with an implicit result role is not new. Finnish grammarians have speculated that whenever the object has (in their terms) accusative case, there is a resultative associated with it, even if it is not overtly expressed (Siro 1974). According to this analysis, ‘shoot the bear-Accusative’ is really ‘shoot the bear dead’ (Yli-Vakkuri 1973:81-82). Furthermore, Toivainen 1993 has suggested that R-objects are always realized in a structurally higher object position than the partitive objects of unbounded verbal predicates. His evidence is that partitive objects of unbounded verbal predicates but not resultative objects can be preceded by accusative measure adverbs.²¹

This idea can be integrated into our theory of abstract Case by making use of Piñon’s proposal that accomplishment predicates have a result theta-role (Piñon 1995). If result role is the lowest role, with the abstract Case feature [+LR], its presence entails that the object is [-LR]. R-objects and I-objects then have different abstract cases; specifically, R-objects are [-HR,-LR], and I-objects are [-HR,+LR].

²¹Of course, these data might have a similar semantic explanation as the similar English contrast between *He ate apples the whole time* and *#He ate the apples the whole time*.

As stated in [19], R-objects are partitive when the object is in the scope of negation or has quantitatively indeterminate reference. For efforts to unify the quantificational partitivity of R-objects with the aspectual partitivity of I-objects on semantic grounds see Heinämäki (1984), Kiparsky (1998), and the references cited there. In line with the syntactic account pursued here, let us suppose that quantitative partitivity is assigned by a null quantifier analogous to overt quantifiers like *paljon* ‘much, many’. The partitive as R-object is then assigned internally to the QP, which itself receives structural case from the governing verb.



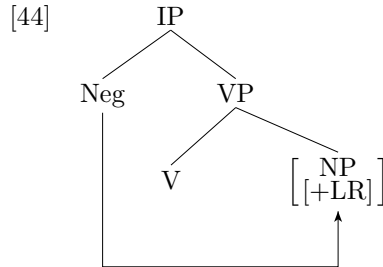
This fits well with the partitive’s status as the unmarked case of objects, both semantically (Heinämäki 1984) and syntactically (Vainikka 1993:142 ff.). The key semantic point is that a sentence like ‘Matti shot the bear’ (genitive) entails that the bear was hit, while ‘Matti shot at the bear’ (partitive) does not entail that it was not hit, though it implicates it (or at least that if the bear was hit, it did not die, as Satu Manninen points out to me) by the Gricean maxim “be informative”. The unmarked status of aspectual unboundedness follows from the assumption that aspectual boundedness derives from the presence of an extra resultative theta-role.

Thus [43] conforms to the generalization that overt resultatives require R-objects. It is a quantificational partitive, with the structure of [42], and thereby an R-object with the abstract case [-HR] like those in [37].

- [43] a. Ammu-i-n karhu-j-a kuoliaa-ksi.
 shoot-Pst-1Sg bear-**Pl-Part** dead-Transl
 ‘I shot bears dead.’
 b. Siirs-i-mme kirjo-j-a ylähylly-lle.
 move-Past-1Pl book-**Pl-Part** top-shelf-All
 ‘We moved books onto the top shelf.’

Sanskrit *ānaśe* ‘possesses’ (lit. ‘has acquired’), Sanskrit *dadhāra* ‘holds’ (lit. ‘has grasped’), Sanskrit *pari-babhūva*, *vivyāca* ‘contains’ (lit. ‘has encompassed’).

The partitive of negation can be assumed to be likewise governed by the negative element, as in [44].²³



The three triggers of partitivity — negation, quantification, and unmarked aspect — can co-occur, which leads to multiple ambiguities (Itkonen 1974:185). In [45] they combine in different ways to yield from two to six different readings of the same sentence. The verb *silitää*, literally ‘to smooth’, can mean ‘stroke, pet’ (e.g. an animal), in which case it is aspectually unbounded and its object NP always has partitive case regardless of its denotation. It can also mean ‘iron’ (clothes), in which case it can be either aspectually unbounded (‘to be ironing’, ‘to iron away at’) or aspectually bounded (‘to iron smooth’), and then the case marking of its object depends on its denotation (quantificational partitivity). With a *plurale tantum* denoting a pair or collection, such as *housut* ‘pants’ we get an extra ambiguity because the aspectual partitive of a single pair or collection (the inherent plural) and of a plurality of pairs or collections have the same form.²⁴ Under negation, as always, the object is partitive regardless of aspectuality or quantification.

- [45]
- a. *Silitin karhuja*: (1) “I stroked the bears” (aspectual partitivity), or (2) “I stroked (some) bears” (both aspectual partitivity and quantificational partitivity).
 - b. *Silitin paitoja*: (1) “I was ironing (‘ironed away at’) the shirts” (aspectual partitivity), or (2) “I ironed (some) shirts” (quantificational partitivity), or (3) “I was ironing (some) shirts” (both).
 - c. *Silitin housuja*: (1) “I was ironing a/the (pair of) pants”, (2) “I was ironing the pants (a fixed number)” (aspectual partitivity), (3) “I ironed (some) pants” (quantificational partitivity), (4) “I was ironing (some) pants” (both).
 - d. *En silitänyt housuja*: (1) “I wasn’t ironing a/the (pair of) pants”, (2) “I wasn’t ironing the pants (fixed number)” (aspectual partitivity),

²³A more interesting solution would be that negation selects a null quantifier like that in [42], which itself assigns partitive case to its complement, but it is not clear how ordinary singular count objects could be dealt with then.

²⁴See Ojeda 1997 for discussion of the semantics of such inherent plurals.

(3) “I didn’t iron (any) pants” (quantificational partitivity), (4) “I wasn’t ironing (any) pants” (both), (5) “I didn’t iron a/the (pair of) pants”, (6) “I didn’t iron the pants (fixed number)” (negation-triggered partitivity).

The outcome so far is that external subjects have the abstract case [+HR], and that R-objects and I-objects are respectively [-HR,-LR] and [-HR,+LR]. These features directly represent the grammatical relations: subjects are [+HR] at all levels and objects are [-HR] at all levels. R-objects and I-objects are further differentiated by the feature [LR].

We now turn to a different class of sentences, with internal arguments that in previous work have been argued to be objects, and argue that they are in fact subjects, as the proposed case theory predicts.

2.2 Existential sentences

2.2.1 Internal subjects

The sole direct argument of an intransitive predicate can be realized either as an external argument ([46a]), or as an internal argument ([46b,c]). (Keep in mind that I am using these terms in reference to the syntactic licensing position, not to a putative D-structure position.) As an external subject, it is a vanilla subject with the case and word order properties discussed in the preceding section, viz. nominative case and agreement if the verb is finite, and genitive case otherwise.²⁵ Comparison with the (b) and (c) sentences shows that internal arguments differ in these respects. They have no agreement and can take the quantificational partitive (as well as overt QPs headed by quantifiers like *paljon*).

- [46] a. Uutise-t jatku-vat.
 news-**PlNom** continue-**3Pl**
 ‘The news will continue.’
- b. Nyt tule-e uutise-t.
 Now come-**3Sg** news-**PlNom**
 ‘Now there comes the news.’
- c. Nyt tule-e uutis-i-a.
 Now come-**3Sg** news-**Pl-Part**
 ‘Now there comes news (items of news).’

²⁵In addition, these sentences allow the word orders with topicalization and focusing illustrated in [17].

Intransitive sentences with internal arguments are recognized by Finnish grammarians as a separate sentence type called *existential* sentences. They were explored in a remarkable series of articles by Ikola 1954, 1955, 1961, 1974, with further contributions by Sadeniemi 1955, Hakulinen 1968, Siro 1974, Karlsson 1978, and Itkonen 1975a, 1975b, 1976a, 1976b, 1980. I cannot hope to do justice to all the insights on existential sentences that these works contain, and will only address the still open question of the status of their subject, which I think my approach brings closer to a resolution.

The internal arguments of existential sentences, which I will argue are *internal subjects*, resemble R-objects of subjectless sentences in some respects and have actually been equated with R-objects by several writers (Wiik 1974, Karlsson 1982, Vilkuina 1989:156). They are also akin to internal subjects of a second major type of clause, the *possessive* construction, which however has a slightly different mix of properties (see section 2.3). The challenge now is to make theoretical sense of the apparently intermediate grammatical status of these internal arguments.

Internal subjects do not agree with a finite verb. Instead, the finite verb receives third person singular default agreement. Internal subjects retain nominative case when the verb is nonfinite, unlike external arguments, which must become genitive. This is shown in [47], where *tulla* ‘come’ in [47a] is a verb that allows existential sentences, while *jatkua* ‘continue’ is not.²⁶

- [47] a. Nyt pitä-isi tul-la uutise-t / uutis-i-a.
 Now must-Cond-(3Sg) come-1Inf news-**PINom** / news-**PIPart**
 ‘Now there should come the news / some news.’
- b. (*)Nyt pitä-isi jatku-a uutise-t / uutis-i-a.
 Now must-Cond-(3Sg) continue-1Inf news-**PIPart**
 ‘Now there should continue the news / some news.’
- c. Uutis-t-en pitä-isi jatku-a nyt.
 news-**PIGen** must-Cond-(3Sg) continue-1Inf now
 ‘The news should continue now.’ (External subject.)

The data in [47] can help pinpoint the location of internal subjects in the VP. The two possibilities are the Specifier of VP (Vainikka 1993:158, Kiparsky 1998²⁷) and the complement of V, i.e. the direct object position (Wiik 1974, Nelson 1998). These examples suggest that it is the latter. In [47c], the external subject raises to the Spec-IP position. In [47a], the subject remains internal, yielding that position to the temporal adverb, and itself then *follows* the infinitive verb of which it is the “subject”. If that order reflects the base position (and

²⁶The negated sentence in [47b] is acceptable with contrastive focus on *uutiset*, like [50b] below. See Vilkuina 1989:159.

²⁷Guilfoyle, Hung, and Travis 1992 make a similar proposal for Malayo-Polynesian.

I do not know why it would not), then the internal subject must be syntactically in the complement position.

A class of quantifiers, such as *paljon* ‘much, many’ in [49], which govern the partitive, may not head external arguments, hence [49c] is ungrammatical (Karttunen 1975). We can say that these quantifiers (like the measure phrases discussed earlier) inherently bear abstract accusative case, which is to say the features $[-HR, -LR]$, and therefore the phrases they head cannot be either external subjects or unbounded (partitive) objects.

- [48] a. Nyt tule-e paljon uutis-i-a.
 Now come-**3Sg** much news-**PI-Part**
 ‘A lot of news is coming now.’
- b. Uutis-i-a tule-e paljon.
 news-**PI-Part** come(-**3Sg**) much
 ‘A lot of news is coming.’
- c. *Paljon uutis-i-a jatku-vat / jatku-u.
 much news-**PI-Part** continue-**3PI** / continue-**3Sg**
 ‘A lot of news will continue.’

By associating the same case feature with the null quantifier in [42], we directly account for the fact that quantitative partitives in general cannot be external subjects:²⁸

- [49] *Uutis-i-a jatku-vat / jatku-u.
 news-**PI-Part** continue-**3PI** / continue-**3Sg**
 ‘News will continue.’

2.2.2 Scope and definiteness

In declarative main clauses the preverbal Spec-IP position must normally be filled somehow.²⁹ In existential sentences it is preferentially filled by an adverb of place or time, or by an experiencer-type oblique argument, but failing that, internal subjects themselves, or their bare nominal head, get fronted there. A fronted internal subject is still incapable of agreement, remains semantically in the scope of negation, and does not acquire any characteristics of external subjects.

²⁸The marginal “transitive existential sentences” discussed in Hakulinen and Karlsson 1979:168 and Nikanne 1990:124 ff. might be analyzed as having a subject with a nominative version of this null quantifier.

²⁹V-initial declaratives such as *Tulee paljon uutisia* do occur, with a special discourse function; see Vilkkuna 1989 for discussion of this and other word order variations.

Internal subjects are partitive (as in [50c]) under the conditions of [19], that is, if they are in the scope of sentence negation, or if they have a quantitatively indeterminate denotation. External subjects remain outside the scope of sentence negation, and retain nominative case under negation (see [50a]).³⁰

- [50] a. Uutise-t (*uutis-i-a) ei-vät jatku.
 news-**PINom** (*news-**Pl-Part**) not-**3Pl** continue
 ‘The news / news will not continue.’
- b. (*)Nyt ei tule uutise-t.
 now not(-**3Sg**) come news-**PINom**
 ‘Now there does not come the news.’
- c. Nyt ei tule uutis-i-a.
 now not(-**3Sg**) come news-**Pl-Part**
 ‘Now there does not come any news.’

The relation to semantic scope is shown by the contrast between [51a], which presupposes that I have brothers and sisters living somewhere and asserts that they do not live in Turku, and [51b], which simply means that no brothers or sisters of mine live in Turku — I might not *have* any brothers and sisters.

- [51] a. Sisarukse-ni ei-vät asu Turu-ssa.
 sibling(-**PINom**)-1SgP not-**3Pl** live T.-Iness
 ‘My brothers and sisters don’t live in Turku.’
 $\forall x (x \text{ is a sibling of mine} \supset \neg (x \text{ lives in T.}))$
- b. Sisaruks-i-a-ni ei asu Turu-ssa.
 sibling-**Pl-Part**-1SgP not-**3Sg** live T.-Iness
 ‘No brothers or sisters of mine live in Turku.’
 $\neg \exists x (x \text{ a sibling of mine} \wedge x \text{ lives in T.})$

A core class of existential verbs (approximately the traditional unaccusatives, it seems) admits even singular definite internal subjects with partitive case under negation (as first noted by Ikola 1955:320).

- [52] a. Anna ei enää tul-lut.
 Anna(**Nom**) not-3Sg any more come-PfP
 ‘Anna did not come any more’ [She stayed away.] (External subject)
- b. Ei tul-lut enää Anna-a.
 Not-3Sg come-PfP any more Anna-**Part**
 ‘Anna did not come any more’ [Perhaps she died.] (Internal subject)

³⁰[50b] is acceptable with contrastive focus on *uutiset*, like [47b]. See fn. 26.

Internal subjects show no ‘definiteness effect’, at least in any obvious sense. They can be either indefinite, as in [53b], or definite, as in [52b] and [46b]. If nominative, they must however be quantitatively determinate.

On the other hand, the aspectual character of the predicate never induces partitive case marking on internal subjects, any more than on external ones. Therefore, our constraint system must have the effect of excluding the correspondence between abstract [+HR] case and morphosyntactic [–HR] case.

As an example of the contrast of quantitative indeterminacy in internal subjects (clause [19b]) consider the semantic difference between the nominative internal subject in [46b] and the partitive internal subject in [46c]. While [46b] refers to a determinate quantity of news, as would be contained in a scheduled news broadcast, [46c] suggests an indeterminate number of news items, such as a series of special bulletins. Clearer examples of the same contrast are furnished by nonhomogeneous plurals which refer to a complete set of a particular size, such as *kaksoset* ‘twins’ (like *housut* ‘pants’ in [45]). The nominative refers to a single such set and the partitive refers to an indeterminate number of such sets.³¹

- [53] a. *Kaksose-t synty-i-vät.*
 twin-**PINom** be-born-Past-**3PI**
 ‘The twins were born.’
- b. (Liisa-lle) *synty-i kaksose-t.*
 (L.-Allat) be-born-Past-**3Sg** twin-**PINom**
 ‘Twins [i.e. a pair of twins] were born (to Liisa).’
- c. (Liisa-lle) *synty-i kaksos-i-a.*
 (L.-Allat) be-born-Past-**3Sg** twin-**PI-Part**
 ‘Twins [one or more pairs] were born (to Liisa).’

2.2.3 How internal subjects differ from objects, and why

If we take seriously the idea that an argument’s abstract case derives from the structural prominence of its theta-role in Semantic Form, then the internal subjects of existential sentences should have the highest lexical theta-role of their clause, hence the abstract case feature [+HR]. Their VP-internal position on the other hand gives them the positional case feature [–HR]. That is, internal subjects are *subjects in object position*. This means that they are *not* objects; in particular, it is not correct to equate them syntactically with R-objects of subjectless verbs (Wiik 1974). (In the examples I indicate the values for the abstract case feature [HR].)

³¹Other such pluralia tantum and collectives that work the same way are *housut* ‘pants’, *sukset* ‘skis’, *sakset* ‘scissors’, *rattaat* ‘cart’, *ryppyt* ‘drink’, *lehdet* ‘leaves’ (foliage), *sormet* ‘fingers’, *kasvot* ‘face’, *käyttöohjeet* ‘instructions’, *tikapuut* ‘ladder’.

‘Send a submarine to sink the ship.’

A second way in which the case-marking of the internal subject of existential sentences differs from the case-marking of the R-object of subjectless sentences relates to the adverbs mentioned in [10], from which Maling (1993) drew support for her case-in-tiers analysis. They may be nominative in subjectless sentences such as passives or imperatives (see [56a]), but they remain genitive in existential sentences (see [56b]).

- [56] a. Siel-lä asut-tiin koko vuosi.
there-Adess live-PastPass whole-(**Nom**) year-(**Nom**)
‘People/we lived there all year.’
- b. Siel-lä kulk-i laivo-j-a koko vuode-n.
there-Adess go-Past(3Sg) ship-Part-Pl all year-**Gen**
‘Ships plied there all year.’

The nominative case marking in [56a] is licit by [28] because the adverbial is a pivot by [27], and genitive is enforced in [56b], as in [29].³²

What [55] and [56] both show is that the nominative case-marking of internal subjects is strictly local, and restricted to the subject itself, while the nominative case-marking of objects of subjectless sentences extends to VP adverbials within the clause and to adverbials and objects in an unbounded domain of nonfinite complement clauses.

A third important difference between internal subjects and R-objects is that aspectually unbounded predicates do not partitivize internal subjects (see [57b]). Like external subjects, they are simply immune from aspectual partitivity (Vilkuna 1989:159).³³

- [57] a. Matti ol-i juuri osta-ma-ssa auto-a.
Matti be-Past(3Sg) just buy-Inf-Iness car-**Part**
‘Matti was just (in the process of) buying a car.’
- b. *Piha-lle ol-i juuri aja-ma-ssa auto-a.
Courtyard be-Past(3Sg) just drive-Inf-Iness car-**Part**
‘A car was just (in the process) of driving into the courtyard.’

³²There are several types of such adverbs, some of them on the way to becoming frozen in nominative or genitive form. Adverbs like *vielä kerran* ‘one more time’, *kolmannen kerran* ‘a third time’ discussed by Maling, while they do show the case alternation, are not ideal to test the conditions of the alternation because they occur readily in the genitive even in sentences with subjectless verbs.

³³Negation and quantitative indeterminacy do trigger partitive case marking on internal subjects; see [51]; this follows from the account proposed in section 2.1.4.

Aspectual partitivity in internal subjects is another instance of the prohibited configuration [??], so it is now clear that will be excluded by the same constraints that exclude aspectual partitivity in external subjects. Internal arguments of “passives”, on the other hand, have the abstract case feature [–HR], i.e. they are true objects, and display the full aspectual boundedness contrast of objects (viz. [±LR]).

Fourth, personal pronouns cannot be internal subjects of existential predicates, whereas they can of course be R-objects. Death’s famous reminder *Et in Arcadia ego* translates as [58b] rather than as [58a] (which remains ungrammatical with any word order).

- [58] a. *Arkadia-ssa-kin on minu-t / minä.
 Arcadia-Iness-too be(3Sg) me-**Acc** / I(**Nom**)
 ‘Even in Arcadia there is me.’
- b. Minä ole-n Arkadia-ssa-kin.
 I(**Nom**) be-1Sg Arcadia-Iness-too
 ‘I am even in Arcadia.’

This follows from the general constraints on pronominal case marking discussed in section 3 below.

A fifth point of difference, noted by Vilkuna 1989, is that internal subjects cannot be subjects of passive participles:

- [59] a. Pidäte-tty henkilö
 arrest-PfP(Nom) person(Nom)
 ‘The/a arrested person.’
- b. *Istu-ttu henkilö
 sit-PfP(Nom) person(Nom)
 ‘The/a sat person.’

The reason is that passive participles cannot be impersonal and thus cannot apply to any intransitive verbs.

Sixth, internal subjects can behave as subjects with respect to disjoint reference and anaphoric coreference constraints. [60a,b] show that a pronoun must be disjoint from the external subject of its clause, and [60c,d] show that a possessive suffix must be coreferential with the subject of its clause ³⁴

³⁴There are some well-known systematic exceptions, notably verbs with an implied causative meaning, such as *viedä* “bring”.

- [60] a. Upot-i-mme laiva-n se-n suoritta-e-ssa
sink-Past-1Pl ship-Gen it-Gen perform-2Ptc-Iness
saattopalvelus-ta.
escort-service-Part
'We sank the ship while it was performing escort duty.'
- b. *Laiva uppos-i se-n suoritta-e-ssa
ship(**Nom**) sink-Past(3Sg) it-Gen perform-2Ptc-Iness
saattopalvelus-ta.
escort-service-Part
'The ship sank while it was performing escort duty.'
- c. *Upot-i-mme laiva-n suoritta-e-ssa-an saattopalvelus-ta.
sink-Past-1Pl ship-Gen perform-2Ptc-Iness-3P escort-service-Part
'We sank the ship while (it was) performing escort duty.'
- d. Laiva uppos-i suoritta-e-ssa-an
ship(**Nom**) sink-Past(3Sg) perform-2Ptc-Iness-3P
saattopalvelus-ta.
escort-service-Part
'The ship sank while performing escort duty.'

The objects of imperatives and bare infinitives behave just like objects of any other transitive verbs in that they are not possible antecedents for anaphora.

- [61] a. Upotta-kaa laiva se-n suoritta-e-ssa
sink-Imper2Pl ship(**Nom**) it-Gen perform-2Ptc-Iness
saattopalvelus-ta.
escort-service-Part
'Sink the ship while it is performing escort duty.'
- b. *Upotta-kaa laiva suoritta-e-ssa-an
sink-Imper2Pl ship(**Nom**) perform-2Ptc-Iness-3P
saattopalvelus-ta.
escort-service-Part
'Sink the ship while [it is] performing escort duty.'

In contrast, judgments for internal subjects such as those in [62] are rather variable across speakers; [62a] is in any case worse than [61a], and [62b] is better than [61b], which everyone rejects as absolutely ungrammatical.

- [62] a. ?Sie-llä uppos-i paljon laivo-j-a nii-den
there-Adess sink-Past(3Sg) many ship-Pl-Part they-PlGen
suoritta-e-ssa saattopalvelus-ta.
perform-2Ptc-Iness escort-service-Part
'Many ships sank there while they were performing escort duty.'

- b. ?S_{ie}-llä uppos-i paljon laivo-j-a
 there-Adess sink-Past(3Sg) many ship-Pl-Part
 suoritta-e-ssa-an saattopalvelus-ta.
 perform-2Ptc-Iness-3P escort-service-Part
 ‘Many ships sank there while performing escort duty.’

The variability in anaphora and disjoint reference seen in [62] is part of a more general pattern. The generalization is that the antecedent of an anaphor is the external subject if there is one. If there is no external subject, then the antecedent is optionally the logical subject, or, still optionally, the highest structurally licensed (direct) argument. An anaphor must have an antecedent in the same clause and a pronoun may not have one. In existential sentences the logical subject and the highest licensed argument coincide; the pattern in [62] arises because this argument only optionally counts as an antecedent.

To restate the conclusion of this section: the sole argument of an existential sentence is not an object. It is a subject in object position, which is to say that it has the abstract case feature [+HR] and the morphosyntactic case feature [−HR].

2.3 The passive

Finnish ‘passives’ are really impersonal sentences whose unexpressed logical subject is a third person plural human *pro*. The implied ‘agent’ is not necessarily agentive, nor are impersonal passives restricted to unergative verbs.

- [63] a. Häne-t tape-taan.
 he-Acc kill-Pass
 ‘He will be killed.’ (by someone, not by something)
- b. Sie-llä kellut-tiin.
 there-Adess float-PastPass
 ‘One floated there.’ (people, not e.g. boats, otters, or corpses)
- c. Sie-llä ol-tiin ärtäne-i-tä.
 there-Adess be-Pass irritated-Pl-Part
 ‘People were irritated there.’ (not e.g. bees)

Note that the predicate adjective in [74c] is obligatorily plural, in agreement with the plurality of the unexpressed logical subject.

With respect to case marking, objects of passive clauses work exactly like objects of subjectless actives (1/2 person imperatives and infinitives). Since they are [−HR], negation and aspect trigger partitive case on them. Passive agents are demoted (this is the defining feature of passive morphology). Therefore they are unlicensed, and do not trigger genitive marking on objects:

- [64] Karhu näh-tiin. Siellä näh-tiin karhu.
 bear(Nom) see-PastPass There see-PastPass bear(Nom)
 ‘The bear was seen.’ ‘A bear was seen there.’

Passive objects are pivots, since they are [-HR] and the passive agent is unlicensed. Therefore objects in their nonfinite complement domain must appear in the nominative rather than in the genitive:

- [65] Sinne lähetet-tiin sukellusvene-i-tä upotta-maan laiva.
 there send-PastPass submarine-**Pl-Part** sink-Inf ship(**Nom**)
 ‘Submarines were sent there to sink the ship.’

Like other [-HR] arguments (but unlike internal subjects), objects of passives can be pronouns:

- [66] Minu-t näh-tiin.
 I-Acc see-PastPass
 ‘I was seen.’

With respect to construal properties such as anaphora and disjoint reference, however, passive sentences differ from objects of subjectless sentences. Passive sentences vacillate about like existential sentences such as [62]. Penttilä (1963) accepts both versions in [67].

- [67] a. Laiva upote-ttiin se-n suoritta-e-ssa
 ship(**Nom**) sink-PastPass it-Gen perform-2Ptc-Iness
 saattopalvelus-ta.
 escort-service-Part
 ‘The ship was sunk while it was performing escort duty.’
 b. Laiva upote-ttiin suoritta-e-ssa-an
 ship(**Nom**) sink-PastPass perform-2Ptc-Iness-3P
 saattopalvelus-ta.
 escort-service-Part
 ‘The ship was sunk while performing escort duty.’

The “translucence” of the demoted subject of passives to anaphora and other construal processes is similar to the optionality in [62] and its explanation is the same. In the absence of an external subject, either the logical subject (the demoted passive agent) or the highest licensed argument (in this case, the object) may be the antecedent, hence the option in [67].

2.4 Oblique subject constructions

2.4.1 Possessive and ncessive constructions

Possessive and ncessive constructions are another type of sentence with [-SC] logical subjects. Unlike the passive agent, the logical subject of these sentences, the possessor or experiencer, is realizable with oblique case. Placed in Spec-IP position, it is positionally licensed as a subject. Because the subject is positionally licensed, it is (*qua* subject) locked into Spec-IP position — an instance of the “freezing effect” (Mohan 1992). Our explanation for the freezing effect is that an argument which does not receive structural case can still be structurally licensed as a direct argument by position, but just in that case it either cannot scramble (or if it scrambles, it loses its direct argument properties).

- [68] a. Minu-lla on Matti / sinu-t.
I-Adess be-3Sg Matti(Nom) / you-Acc
'I have Matti / you.'
- b. *Sinu-t / *Matti on minu-lla.
youAcc / Matti(Nom) be-3Sg I-Adess
'I have Matti / you.'

This is confirmed by anaphora. An oblique can antecede anaphors only if it is preverbal, as in [69a]:³⁵

- [69] a. Liisa-lla_i ol-i häne-t_j poikaystävä-nä olle-ssa-an_{i,*j}
Liisa-Adess be-Past(3Sg) him-Acc boyfriend-Ess being-Iness-3Poss
Ruotsissa.
Sweden-Iness
'Liisa had him as a boyfriend when she was in Sweden.'
- b. Hän_i ol-i Liisa-lla_j poikaystävä-nä
he(Nom) be-Past(3Sg) Liisa-Adess boyfriend-Ess
olle-ssa-an_{i,*j} Ruotsi-ssa.
being-Iness-3Poss Sweden-Iness
'He was with Liisa as a boyfriend when he was in Sweden.'

Liisalla in [69a] is a possessor, hence the highest argument (logical subject), and because of its position qualifies as a grammatical subject. In [69b], *Liisalla* is a kind of location, hence not a logical subject.

In general, logical subjects (i.e. arguments assigned the highest theta-roles of their predicates) function as grammatical subjects with respect to anaphora regardless of case, provided they are in initial position:

³⁵See Wechsler 1995 for discussion of these anaphora facts.

- [70] a. He-i-stä_i tul-i kuol-tu-a-an_i sankare-i-ta.
 they-Pl-Elat becme-Past(3Sg) die-PPP-Part-3P hero-Pl-Part
 ‘They became heroes after they died.’
- b. Peka-n_i täyty-i kerto-a Mati-lle_j työ-stä-än_{i,*j}.
 Pekka-Gen must-Past(3Sg) tell-Inf Matti-Allat work-Elat-3P
 ‘Pekka had to tell Matti about his (Pekka’s) work.’
- c. Tyttö-ssä_i on isoäiti-nsä_i näkö-ä.
 girl-Iness be(3Sg) grandmother(Gen)-3P look-Part
 ‘The girl has her grandmother’s looks.’

It is important that this is only a property of the logical subject (the most prominent argument). Other obliques do not easily antecede anaphors, even if they are placed in Spec-IP position:

- [71] a. *?Mati-lle_j kerrot-tiin työ-stä-än_{*j}.
 Matti-Allat tell-PastPass work-Elat-3P
 ‘Matti was told about his work.’
- b. *?Hei-ltä_i ote-taan juos-tu-an_i verinäyte.
 They-Ablat take-Pass run-PPP-3P blood sample
 ‘A blood sample is taken from them after running.’

This follows from the preceding generalization about antecedents (section 2.2.3).

2.4.2 The dative-genitive

[–SC] indirect objects have genitive case if they control a PRO subject of a non-finite clause, and allative (or adessive) case otherwise.

- [72] a. Anno-i-n heidä-n men-nä.
 give-Past-1Sg they-Pl-Gen go-1Inf
 ‘I let them go.’
- b. Anno-i-n hei-lle karhu-n.
 give-Past-1Sg they-Pl-Allat bear-Gen
 ‘I gave them a bear.’

Historically, this genitive (let us call it the *indirect genitive*) is the remnant of a now lost dative case. The construction in [72a] appears with a small group of verbs, principally *antaa* ‘give’ *suoda*, *sallia* ‘allow’, and *käskää* ‘command’. The question is whether the indirect genitive is assigned by the main verb — the position taken here — or whether it is a genitive subject of the infinitive clause. That is, are ‘let’ sentences like [73a] analogous to ‘force’ sentences like [73b], or are they analogous to ‘want’ sentences like [73c], whose complements take genitive subjects, as do oblique temporal clauses like [73d]?

- [73] a. Anno-i-n sinu-n / Mati-n näh-dä karhu-n.
 let-Pst-1Sg you-**Gen** / Matti-**Gen** see-1Inf bear-**Gen**
 ‘I let you / Matti see a/the bear.’ (genitive indirect object controls
 1st inf.)
- b. Pakot-i-n sinu-t / Mati-n näke-mä-än karhu-n.
 force-Pst-1Sg you-**Acc** / Matti-**Gen** see-2Inf-Illat bear-**Gen**
 ‘I forced you / Matti to see a/the bear.’ (direct object controls
 oblique 2nd inf.)
- c. Halus-i-n sinu-n / Mati-n näke-vä-n karhu-n.
 want-Pst-1Sg you-**Gen** / Matti-**Gen** see-1Part-Gen bear-**Gen**
 ‘I wanted you / Matti to see a/the bear.’ (downstairs genitive
 subject)
- d. Nuku-i-n sinu-n / Mati-n näh-de-ssä karhu-n.
 sleep-Pst-1Sg you-**Gen** / Matti-**Gen** see-2Ptc-Iness bear-**Gen**
 ‘I slept while you / Matti saw a/the bear.’ (downstairs genitive
 subject)

Unlike other genitive objects, such as the object of ‘force’ in [73b], the indirect genitive is invariant under passivization (compare [74a] with [74b]) and under negation, and appears in pronouns and plurals as well. This clearly shows that it does not get structural case from the verb of the main clause.

- [74] a. Sinu-n / Mati-n anne-ttiin näh-dä karhu.
 you-**Gen** / Matti-**Gen** let-PassPst see-1Inf bear-**Nom**
 ‘You were allowed to see a/the bear.’ (downstairs nominative
 object)
- b. Sinu-t / Matti pakote-ttiin ampu-ma-an karhu.
 you-**Acc** / Matti-**Nom** force-PassPst shoot-2Inf-Illat bear-**Gen**
 ‘You / Matti were forced to shoot a/the bear.’ (downstairs
 nominative object)
- c. Sinu-n / Mati-n halut-tiin näke-vä-n karhu-n.
 you-**Gen** / Matti-**Gen** want-PassPst see-1Part-Gen bear-**Gen**
 ‘It was wanted for you / Matti to see a/the bear.’ (downstairs
 genitive retained)
- d. Nuku-ttiin sinu-n / Mati-n näh-de-ssä karhu-n.
 sleep-PassPst you-**Gen** / Matti-**Gen** see-2Ptc-Iness bear-**Gen**
 ‘It was slept while you / Matti saw a/the bear.’ (downstairs
 genitive retained)

For this reason it is often assumed that the indirect genitive is a genitive subject of the complement clause, like [73c]. Carlson 1978 provides telling evidence

against this view, and argues that the indirect genitive is an indirect (dative) object of the main verb, on the basis of the data in [74]–[76]. These data establish that the (a) sentences in [73]–[76] are built like the (b) sentences, and unlike the object complements in the (c) sentences and the temporal adjuncts in the (d) sentences. First, [74a] shows that the downstairs object of the infinitive clause turns nominative if the main verb *antaa* is passivized, just like the downstairs object of regular object control infinitives like [74b]. The reason is that passivization in the main clause eliminates its subject (that is, demotes is [+HR] argument), making [74a,b] subjectless, which allows nominative object marking in the complement. In contrast, passivization in the main clause has no effect on the complement’s subjects *sinun* and *Matin* in [74c,d], which continue to trigger genitive objects below them. Since [74a] has no properly licensed subject, the genitives *sinun* and *Matin* in [74a] cannot be subjects of the embedded clause, so they must be objects of the main clause.

Negation provides similar evidence. The genitive subject of complements and adjuncts creates an opaque domain whose object is immune from the participializing force of the main clause’s negation (see [75c,d]). As is normally the case with negation, there is quite a bit of variation (depending on scope, presupposition, and probably other factors) but the versions shown here are the preferred ones. This again shows the genitive in [75a] is not a subject of the infinitive, but an object of the main verb.

- [75] a. E-n anta-nut sinu-n näh-dä karhu-a.
 not-1Sg let-PfP you-**Gen** shoot-1Inf bear-**Part**
 ‘I didn’t let you see a/the bear.’ (downstairs partitive object)
- b. E-n pakotta-nut sinu-a näke-mä-än karhu-a.
 not-1Sg force-PfP you-**Part** see-1Inf bear-**Part**
 ‘I didn’t get you to see a/the bear.’ (downstairs partitive object)
- c. E-n halun-nut sinu-n / Mati-n näke-vä-n karhu-n.
 not-1Sg want-PfP you-**Gen** / Matti-**Gen** see-1Part-Gen bear-**Gen**
 ‘I didn’t want you / Matti to see a/the bear.’ (downstairs genitive retained)
- d. E-n nukku-nut sinu-n / Mati-n näh-de-ssä
 not-1Sg sleep-PfP you-**Gen** / Matti-**Gen** see-2Ptc-Iness
 karhu-n.
 bear-**Gen**
 ‘I didn’t sleep while you / Matti saw a/the bear.’ (downstairs genitive retained)

Another piece of evidence confirming the object status of indirect genitives is the behavior of the reflexive *itse*, which requires an antecedent in the same

clause. The reflexive *itse* is grammatical in [76a,b] but not in [76c,d]. The judgments, which are absolutely crisp, can be explained on the assumption that *itse* is an object of the main clause in [76a,b] and a subject of the lower clause in [76c,d].

- [76] a. Anno-i-n itse-ni näh-dä karhu-n.
 let-Pst-1Sg self-(**Gen**)-1Sg shoot-1Inf bear-**Gen**
 ‘I let myself see a/the bear.’ (upstairs indirect object reflexivizes)
- b. Pakot-i-n itse-ni näke-mää-n karhu-n.
 force-Past-1Sg self-(**Nom**)-1Sg see-1Inf bear-**Gen**
 ‘I forced myself to see a/the bear.’ (upstairs direct object reflexivizes)
- c. *Halus-i-n itse-ni näh-dä karhu-n.
 let-Pst-1Sg self-(**Gen**)-1Sg see-1Inf bear-**Gen**
 ‘I wanted myself to see a/the bear.’ (reflexivization must be clause-bounded)
- d. *Nuku-i-n itse-ni näh-de-ssä karhu-n.
 sleep-PassPst self-(**Gen**)-1Sg see-2Ptc-Iness bear-**Gen**
 ‘I slept while myself saw a/the bear.’ (reflexivization must be clause-bounded)

On the other hand, the indirect genitive of the *let* construction, unlike other genitive objects, is invariant under passivization (compare [74a] with [74b]) and under negation (cf. [75]a), and appears in pronouns and plurals as well, where the object normally has morphological accusative and nominative. This shows that unlike the object of ‘force’, the object of ‘let’ does not get structural case from the verb of the main clause. That is the basis for the usual assumption that it gets case as a genitive subject of the complement clause, like [73c].

If we accept on the strength of the above evidence that the indirect genitive is the object of the main verb, why is it retained in the passive ([74b]) and under negation ([75b]), and why does it appear in pronouns and plurals? The reason must be that this type of genitive is an inherent oblique case. The generalization is thus that the recipient theta-role of *antaa* does not bear structural case, i.e. it is [-SC], and receives morphological allative case when the lower role is nominal, and non-structural (inherent) genitive case when the lower role is sentential. Or putting it differently, [-SC] indirect objects are genitive if they control a PRO, and allative case otherwise.

This interpretation is corroborated by the variation seen in the verb *käskeä* ‘order’, which allows both the ‘let’ construction of the (a) sentences of [73]–[76] and in the ‘force’ construction of the (b) sentences of [73]–[76], with no detectable semantic or thematic difference:

- [77] a. Käsk-i-n häne-n men-nä.
 order-Past-1Sg he-**Gen** go-Inf
 ‘I ordered him to go.’
 b. Käsk-i-n häne-t mene-mä-än.
 order-Past-1Sg he-**Acc** go-Inf-III
 ‘I ordered him to go.’

The two constructions differ minimally in whether the oblique [–HR,–LR] argument is [–SC] or [+SC].

An additional piece of evidence comes from dialects such as those of Häme and Satakunta, where the subject of intransitive (typically unaccusative) infinitives that are complements of verbs like *antaa* are case-marked like objects of the main verb, rather than as invariant genitives (Ikola 1954:235).

- [78] a. Anno-i-n lehmä-t ol-la sie-llä.
 let-Past-1Sg cow-PlNom be-Inf there
 ‘I let the cows be there.’
 b. Isäntä käsk-i minu-a tul-la.
 boss(Nom) tell-Past(3Sg) me-Part come-Inf
 ‘The boss told me to come.’

The standard language would have gen.pl. *lehmien* for *lehmät* in [78a], and gen. *minun* for *minua* in [78b]. In our terms, this dialect treats the oblique [–HR,–LR] theta-role as [+SC] rather than [–SC].

A parallel “promotion” to structural case is seen in neccessive constructions such as [79] (Laitinen and Vilkuna 1993). They have an oblique genitive subject in the standard language, which may, again with intransitive predicates, appear in the form of a nominative internal (non-agreeing) subject in a group of dialects which overlap with those that have the promotion mentioned in the preceding paragraph (the core area being central Häme, Savo, and Bothnia, according to Laitinen and Vilkuna 1993:26).

- [79] a. Nämä lista-t ol-isi hyvä ol-la
 These(**PlNom**) lathe-**PlNom** be-Subj(3Sg) good be-Inf
 paksu-j-a.
 thick-Pl-Part
 ‘It would be good for these lathes to be thick.’ [It would be good if they were thick.]
 b. Nä-i-den listo-j-en ol-isi hyvä ol-la
 These-**Pl-Gen** lathe-**Pl-Gen** be-Subj(3Sg) good be-Inf
 paksu-j-a.
 thick-Pl-Part
 ‘(id.)’

There is however an interesting difference. Unlike oblique genitive object promotion, neccessive subject promotion does not apply to personal pronouns:

- [80] a. *Me ol-isi hyvä ol-la varovais-i-a.
 We(**Nom**) be-Subj(3Sg) good be-Inf careful-Pl-Part
 ‘For us to be careful would be good.’ [It would be good if we were careful.]
- b. Mei-dän ol-isi hyvä ol-la varovais-i-a.
 We-**Gen** be-Subj(3Sg) good be-Inf careful-Pl-Part
 ‘(id.)’

This is yet another special case marking property of pronouns which we will take up in section 3.

2.5 Summary: the clause types and case configurations of Finnish

The four sentence types of Finnish reviewed in sections 2.1–2.4 are summarized in [81]. For each sentence type the first column shows the properties of its subject and the second shows the properties of its object. In the row for morphological case marking the diagnostics of [-HR] are *-t* in pronouns and *-n* in nouns; existential subjects do not bear [-HR] case, as shown by the fact that they are compatible with genitive case marking on the (complement’s) object. I leave out the feature [-LR] from the table since it is of interest only for distinguishing between higher and lower objects (R-objects and I-objects).

[81]

Str.C.	Transitive		Existential	Passive		Oblique	
	Subj	Obj	Subj	Subj	Obj	Subj	Obj
Abstr	[+SC] [+HR]	[+SC] [-HR]	[+SC] [+HR]	[-SC] [+HR]	[+SC] [-HR]	[-SC] [+HR]	[+SC] [-HR]
Morph	[]	[-HR]	[]	—	[-HR]	—	[-HR]
Pos	[+HR]	[-HR]	[-HR]	—	[-HR]	[+HR]	[-HR]
	(a)	(f)	(b)	(c)	(d)	(e)	(f)

The letters at the bottom of the table refer to the case configurations that emerge from this tabulation, which correspond to the conventional categories as shown in [82].

- [82] a. External Subjects

- b. Internal Subjects (existential sentences)
- c. Passive Subjects (demoted *pro*)
- d. Passive Objects
- e. Oblique Subjects (possessors and necessary subjects)
- f. Objects (other)

The diagnostic environments that assign these argument types their “degrees of subjecthood” group into three sets of criteria, which respectively pick out external arguments, subjects, and the most prominent direct argument.

- [83]
- a. *External argument diagnostics*: positionally licensed [+SC, +HR].
 1. External subjects get genitive case if the verb is nonfinite.
 2. External subjects do not get partitive case under negation.
 3. External subjects agree in person and number with the finite verb.
 4. External subjects can be controlled (PRO).
 - b. *Subject diagnostics*: [+SC, +HR].
 5. Subjects do not get aspectual partitive case.
 6. Presence of a subject requires *-n* on R-objects (Jahnsson’s Rule).
 - c. *Anaphoric prominence diagnostics*: logical subject ([+HR]), or most prominent [+SC] (direct) argument.
 7. Prominent arguments may be antecedents of anaphors (possessive suffixes).
 8. Prominent arguments may require disjoint reference with respect to pronouns.
 9. Prominent arguments may control PRO.

It is clear that the diagnostics do not group in arbitrary ways. The last set, for example, comprises all and only the prominence-oriented construal processes of the language.

The results are summarized in table [84], where + in a cell marks a “subject property”. In some cases the diagnostics are inapplicable, or trivially satisfied. For example, oblique arguments cannot bear genitive or partitive case, so oblique subjects naturally cannot receive genitive case from nonfinite verbs or partitive from negation. In such cases I leave a blank in the table. Parentheses mark the optionality which was noted for anaphora and other construal processes. The shaded areas mark off the plus fields, and define three kinds of structural “subject” of Finnish, viz. external subject, subject, and most prominent theta-role.

[84]

	ExtSubj	IntSubj	PassSubj	PassObj	OblSubj	Object
A. Abstract case	$\begin{bmatrix} +SC \\ +HR \end{bmatrix}$	$\begin{bmatrix} +SC \\ +HR \end{bmatrix}$	$\begin{bmatrix} -SC \\ +HR \end{bmatrix}$	$\begin{bmatrix} +SC \\ -HR \end{bmatrix}$	$\begin{bmatrix} -SC \\ +HR \end{bmatrix}$	$\begin{bmatrix} +SC \\ -HR \end{bmatrix}$
B. Morph. case	[]	[]	—	[-HR]	—	[-HR]
C. Pos. case	[+HR]	[-HR]	—	[-HR]	[+HR]	[-HR]
1. Nonfin. Gen.	+	—	—	—	—	—
2. No Neg.Part.	+	—	—	—	—	—
3. Agreement	+	—	—	—	—	—
4. PRO	+	—	—	—	—	—
5. No Asp.Part.	+	+	—	—	—	—
6. J.R.	+	+	—	—	—	—
7. Anaphora	+	(+)	(+)	(+)	(+)	—
8. Disjoint ref.	+	(+)	(+)	(+)	(+)	—
9. Controller	+	(+)	(+)	(+)	(+)	—

I conclude that there is no need to impose a scale of subjecthood, and that the concept of *ject* as neutralization of subject and object is not required. Rather, in so far as there are different kinds of subjects it is because grammatical constraints are keyed to several kinds of prominence, in ways that can be specified exactly by the proposed case features. A set of case-related properties (1-4 in table [84]) separate external arguments, defined as bearing [+SC,+HR] abstract case and [+HR] positional case, from all other [+SC] arguments. Jahnsson's Rule and aspectual partitivity picks out [+SC,+HR] arguments, and construal processes pick out the prominence peak (as well as privileging the external argument in the way discussed above).

3 The noun/pronoun split

In section 2 we found four systematic differences between the syntax of nouns and pronouns.

- [85]
- a. Pronominal R-objects have morphological accusative case ([19a]).
 - b. Only nominal R-objects alternate between genitive and nominative in accord with Jahnsson's Rule ([19b,c]).
 - c. Pronouns cannot be internal subjects (section 2.2.3, example [58]).

- d. Pronouns cannot undergo necessary raising (section 2.4.2, example [80]).

In section 3.1 I complete the constraint system to account for these data and provide constraint tables for the major phenomena discussed in this paper. In section 3.2 I show that the constraints relating to the special case marking of pronouns generate the basic typology of split ergativity. In section 3.3 I argue that the relevant split is actually not that between nouns and pronouns but between projecting and nonprojecting heads.

3.1 The constraints

Faithfulness constraints are of two types. MAX constraints require that an abstract Case feature specification $[\alpha F]$ must correspond to the same feature specification $[\alpha F]$ at the morphosyntactic level. DEP constraints require that a morphosyntactic case feature specification $[\alpha F]$ must correspond to the same abstract Case feature specification $[\alpha F]$.³⁶

The MAX constraints include the general faithfulness constraint $\text{MAX}[\alpha F]$.

- [86] $\text{MAX}[\alpha F]$: An argument assigned a theta-role bearing the abstract Case feature specification $[\alpha F]$ must bear the morphosyntactic case feature specification $[\alpha F]$.

The specific MAX constraints that generate the case splits between pronouns single out the input/output correspondence for the feature [HR] in pronouns and for the feature [LR] in nouns. Using D to symbolize pronouns, and using N to symbolize nouns, we have $\text{MAX}[-\text{HR}]/\text{D}$ and $\text{MAX}[-\text{LR}]/\text{N}$.³⁷

- [87] a. $\text{MAX}[-\text{HR}]/\text{D}$: A pronominal argument assigned a theta-role bearing the abstract structural Case feature specification $[-\text{HR}]$ must bear the morphosyntactic case feature specification $[-\text{HR}]$.
- b. $\text{MAX}[-\text{LR}]/\text{N}$: A nominal argument assigned a theta-role bearing the abstract structural Case feature specification $[-\text{LR}]$ must bear the morphosyntactic case feature specification $[-\text{LR}]$.

³⁶In phonology, MAX and DEP constraints pertain to segments, not features. Another point: this formulation of the constraints makes the natural but perhaps not inevitable assumption that Semantic Form is the “Input” and morphosyntactic structure is the “Output”. Since Correspondence Theory is symmetrical as between Input and Output, nothing hangs on this. If it should turn out to be the other way round, our MAX constraints would simply become DEP constraints, and vice versa.

³⁷It may be possible to formulate them more sweepingly as $\text{MAX}[\alpha \text{HR}]/\text{D}$ and $\text{MAX}[\alpha \text{LR}]/\text{N}$, but since $\text{MAX}[\text{+F}]$ is undominated (in Finnish) the added effect is not detectable, so I have stayed with the more conservative formulation.

These are privileged MAX constraints which are subsumed by the general MAX[α F] constraint but which become visible when they are ranked ahead of it and other constraints intervene between them. Loosely put, [87a] says that a pronominal object should be accusative (rather than nominative, genitive, or ergative), and [87b] says that a nominal subject or higher object should be ergative or genitive (rather than accusative or nominative). The effect of these constraints is in principle twofold. Either some other morphosyntactic case than the disfavored one is assigned, or the offending configuration is avoided by changing the abstract case. For example, a potential violation of [87a] in a pronoun may be avoided by assigning the pronoun a [-HR] morphological case, or by assigning the pronoun abstract [+HR] case, i.e. making it a subject.

These constraints are potentially violable like any other constraint, if higher-ranked constraints so require, and actual violations are amply instantiated in our analysis.

The special affinity of pronouns for morphological accusative case observed in Finnish (see [85a]) can now be seen to be a consequence of MAX[-HR]/D.

Correspondingly, the fact that nominal R-objects get genitive case when Jahnsson's Rule does not permit them to have nominative case (see [85b]) is a consequence of MAX[-LR]/N.

These are all the constraints we need for the basic case assignment patterns.³⁸ The ranking must be as in [88], and its working is illustrated for the key cases in the table below:³⁹

$$[88] \text{ MAX}[-\text{HR}]/\text{D} \gg *[-\text{HR}] \gg \text{JR} \gg \text{MAX}[\alpha\text{F}] \gg *[\alpha\text{F}]$$

The constraint tables for objects and subjects follow.

³⁸As they stand, our constraints do not cover adnominal genitives, such as *karhu-n pesä* 'the bear's den', *minu-n talo-ni* 'my house', or genitives with nonfinite verb forms. They could be derived if we add a constraint requiring nominative external arguments to show subject-verb agreement.

³⁹In the glosses I translate *karhu* as 'the bear', but Finnish has no article and 'a bear' would be an equally good gloss. In 'a bear was seen' the preferred word order would then be reversed to *nähtiin karhu*.

[89]

Objects	MAX[-HR]/D	*[-HR]	JR	MAX[αF]	*[αF]
[-HR,-LR]: <i>näit karhun</i> ‘you saw the bear (Gen.)’					
1a. karhu-t [-HR,-LR] (Acc.)		*			**
1b. ☞ karhu-n [+HR] (Gen.)				*	*
1c. karhu-∅ [] (Nom.)			*	*	
1d. karhu-a [-HR] (Part.)		*		*	*
[-HR,-LR]: <i>näit hänet</i> ‘you saw him (Acc.)’					
2a. ☞ sinu-t [-HR,-LR] (Acc.)		*			**
2b. sinu-n [+HR] (Gen.)	*			*	*
2c. sinä-∅ [] (Nom.)	*		*	*	
2d. sinu-a [-HR] (Part.)		*		*	*
[-HR,+LR]: <i>löit häntä</i> ‘you hit him (Prt.)’					
3a. häne-t [-HR,-LR] (Acc.)		*		*	**
3b. häne-n [+HR] (Gen.)	*			*	*
3c. hän-∅ [] (Nom.)	*		*	*	
3d. ☞ hän-tä [-HR] (Part.)		*		*	*
[-HR,-LR]: <i>karhu nähtiin</i> ‘the bear (Nom.) was seen’					
4a. karhu-t [-HR,-LR] (Acc.)		*		*	**
4b. karhu-n [+HR] (Gen.)				*	*
4c. ☞ karhu-∅ [] (Nom.)				*	
4d. karhu-a [-HR] (Part.)		*		*	*
[-HR,-LR]: <i>hänet nähtiin</i> ‘he (Acc.) was seen’					
5a. ☞ häne-t [-HR,-LR] (Acc.)		*			**
5b. häne-n [+HR] (Gen.)	*			*	*
5c. hän-∅ [] (Nom.)	*			*	
5d. hän-tä [-HR] (Part.)		*		*	*
[-HR,+LR]: <i>häntä lyötiin</i> ‘he (Part.) was hit’					
6a. häne-t [-HR,-LR] (Acc.)				*	**
6b. häne-n [+HR] (Gen.)	*			*	*
6c. hän-∅ [] (Nom.)	*			*	
6d. ☞ hän-tä [-HR] (Part.)				*	*
[-HR,-LR]: <i>näit karhut</i> ‘you saw the bears (Nom.)’					
7a. karhu-t [-HR,-LR] (Acc.)		*			**
7b. karhu-je-n [+HR] (Gen.)				*	*
7c. ☞ karhu-t [] (Nom.)				*	
7d. karhu-j-a [-HR] (Part.)		*		*	*

[90]

Subjects		MAX[-HR]/D	*[-HR]	JR	MAX[αF]	*[αF]
[+HR,+LR]: <i>sinä tulit</i> ‘you (Nom.) came’						
1a.	sinu-t [-HR,-LR] (Acc.)		*		*	**
1b.	sinu-n [+HR] (Gen.)				*	*
1c.	☞ sinä-∅ [] (Nom.)				*	
1d.	sinu-a [-HR] (Part.)		*		*	*
[+HR,-LR]: <i>sinä näit hänet</i> ‘you (Nom.) saw him’						
2a.	sinu-t [-HR,-LR] (Acc.)		*		*	**
2b.	sinu-n [+HR] (Gen.)				*	*
2c.	☞ sinä-∅ [] (Nom.)				*	
2d.	sinu-a [-HR] (Part.)		*		*	*
[+HR,-LR]: <i>Matti näki hänet</i> ‘M. (Nom.) saw him’						
3a.	Mati-t [-HR,-LR] (Acc.)		*		*	**
3b.	Mati-n [+HR] (Gen.)				*	*
3c.	☞ Matti-∅ [] (Nom.)				*	
3d.	Matti-a [-HR] (Part.)		*		*	*

Corresponding to the two special MAX constraints MAX[-HR]/D and MAX[-LR]/N, we have the two special DEP constraints in [91]:

- [91] a. DEP[-HR]/D: A pronominal argument bearing the morphosyntactic structural case feature [-HR] must be assigned a theta-role bearing the abstract Case feature [-HR].
- b. DEP[-LR]/N: A nominal argument bearing the morphosyntactic structural case feature [-LR] must be assigned a theta-role bearing the abstract Case feature [-LR].

These are again privileged DEP constraints which are subsumed by the general DEP[αF] constraint but which become visible when they are ranked ahead of it and other constraints intervene between them. Informally put, [91a] says that pronominals which bear accusative and dative case should not be subjects, and [91b] says that nominals which bear genitive or ergative case should not be lowest objects.

The fact that pronouns cannot be internal subjects (see [85c]) is a consequence of DEP[-HR]/D. All internal subjects involve a mismatch of [+HR] abstract case with [-HR] morphological case. What DEP[-HR]/D says is that

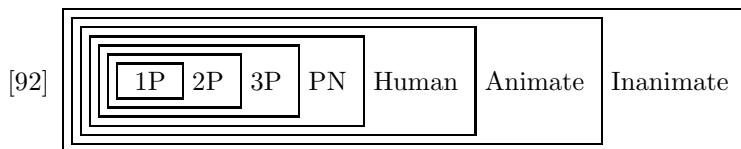
this mismatch is least tolerable in pronouns. Therefore, this constraint must dominate whatever constraint forces subjects into the VP (see 2.2 for inconclusive comments on what that constraint might be).

By the same reasoning, the fact that only nouns undergo neccessive raising (see [85d]) is a consequence of DEP[-HR]/D, for neccessive raising also yields internal subjects. Note that only direct arguments can violate DEP[-HR]/D as formulated. This justifies our assumption that nonstructural case (assigned to arguments which are “demoted” by the feature [-SC]) does not fall under the faithfulness constraints. Neccessive raising is blocked in pronouns because it would there create a violation of DEP[-HR]/D.

This completes the explanation of the four special features of pronominal case marking summarized in [85c], which emerged from the descriptive analysis in section 2. The following subsection shows that these Finnish facts are reflexes of the principles that govern split ergativity.

3.2 Case neutralization and case split

It is well known that the case marking in different classes of nominals is often differentiated according to the “animacy” hierarchy in [92].⁴⁰



The basic generalization is as follows:

- [93] a. Ergative case is overtly marked on the low end of the hierarchy.
 b. Accusative case is overtly marked on the high end of the hierarchy.

The most familiar reflection of this tendency is the *split ergativity* pattern illustrated in [94] for Dyirbal (Dixon 1972), where [-LR] is neutralized in pronouns and [-HR] is neutralized in nouns:⁴¹

⁴⁰The hierarchy was extensively discussed by Kenneth Hale in lectures at M.I.T. in the late sixties and shown to play an important role in Tanoan syntax in Hale 1972; see Silverstein 1976 and Dixon 1994 for typological and historical documentation, with particular reference to ergative case systems.

⁴¹This is actually not exactly Dixon’s assignment of cases but the one argued for by Goddard 1982.

[94]

	Ergative	Nominative	Accusative
Nouns	<i>-nggu, -ru</i>	∅	∅
Pronouns	∅	∅	<i>-na</i>

Split ergativity of this kind results when the distinction between Ergative and Nominative is suppressed (in favor of Nominative) on the high end of the scale (here in Pronouns) and the distinction between Accusative and Nominative is suppressed (also in favor of Nominative) on the low end of the scale (here in Nouns).

- [95] a. ngadya bangun dyugumbi-ru (bayi yara
 1sg(**NOM**) detII-**ERG** woman-**ERG** (detI-**ACC** man-**ACC**
 balga-n)
 hit-PRET)
 ‘I, the woman (hit the man)’
- b. ngadya balan dyugumbil (bani-yu)
 1sg(**NOM**) detII(**NOM**) woman-(**NOM**) (come-PRET)
 ‘I, the woman, (came)’
- c. ngaygu-na balan dyugumbil (balga-n bangul
 1sg-**ACC** detII(**NOM**) woman(**NOM**) (hit-PRET detI-**ERG**
 yara-nggu)
 man-**ERG**)
 ‘Me, the woman (the man hit)’

The two neutralizations are independent of each other. First, they can take place at different cutoff-points on the scale, as in Djapu (Morphy 1983):

[96]

	Ergative	Nominative	Accusative
Non-human	<i>-thu</i>		
Human	<i>-thu</i>		<i>-nha</i>
Pronouns			<i>-nha</i>

Secondly, either one can take place without the other. Adyghe has only the Ergative/Nominative neutralization on the high end,

- [97] ‘house’ ‘I’
 Nom. vnə(-r) sə
 Erg. vnə-m sə

and English has only the Accusative/Nominative neutralization on the low end (“split accusativity”):

- [98] Nom. house I
 Acc. house me

English is of course not the most convincing example because case is arguably not syntactically relevant in English, but this neutralization is very widespread, occurring for example in French, Ostyak (Finno-Ugric), Zuni (isolate, Newman 1965), Yukagir (isolate), Yoruba (Niger-Congo), Kobon (New Guinea), and in numerous ergative languages.

Ergative case, like genitive case, has the feature value [-LR]. Like ergative case, genitive is likewise neutralized with nominative case on the high end of the scale (“split genitivity”). In Yukagir, first and second person pronouns have no genitive ending (Angere 1956:74,155).

- | | | | |
|----------|-------------|------------|----------------------|
| [99] Met | ecie. | Alma-n | terikeh. |
| I(Nom) | house(Nom) | Shaman-Gen | wife(Nom) |
| | ‘My house.’ | | ‘The shaman’s wife.’ |

These case splits are part of a larger pattern. Split dativity, as in Spanish and Hindi, involves use of the dative (with the case features [-LR,-HR]) in preference to nominative case to mark objects at the high end of the scale:

- [100] Pedro vio a una mujer (*a un accidente).
 Pedro saw Dat a woman (Dat an accident).
 ‘Pedro saw a (specific) woman (an accident).’

Split case is Faithfulness due to the two MAX constraints already stated in [87]. A complete account of case splits would require that MAX[-HR]/D and MAX[-LR]/N be relativized to the scale in [92] to get two constraint hierarchies:

- [101] a. MAX[-HR]/1P, MAX[-HR]/1,2P, . . . ,
 b. MAX[-LR]/INANIM, MAX[-LR]/NONHUMAN, . . .

The effects of these constraints are summarized in table [102].

- [102] Case marking:

	MAX[-LR]/N	MAX[-HR]/D	* α F	MAX[α F]
1. [+HR,-LR]Pro [-HR,+LR]NP: 'I threw the rock'				
a. [] [] (Nom+Nom)				***
b. [] [-LR] (Nom+Erg)			*	***
c. [] [-HR] (Nom+Acc)			*	**
d. [-HR] [] (Acc+Nom)			*	****
e. [-HR] [-LR] (Acc+Erg)			**	****
f. [-LR] [] (Erg+Nom)			*	***
g. [-LR] [-HR] (Erg+Acc)			**	**
2. [+HR,-LR]NP [-HR,+LR]Pro: 'The rock hit me'				
a. [] [] (Nom+Nom)	*	*		***
b. [] [-LR] (Nom+Erg)	*	*	*	***
c. [] [-HR] (Nom+Acc)	*		*	**
d. [-HR] [] (Acc+Nom)	*	*	*	****
e. [-HR] [-LR] (Acc+Erg)	*	*	**	****
f. [-LR] [] (Erg+Nom)		*	*	***
g. [-LR] [-HR] (Erg+Acc)			**	**

The rankings of the constraints generate the core typology of split case:

[103] a.

Dyirbal	N	Pro
A: [+HR,-LR]	Erg	\emptyset
O: [-HR,+LR]	\emptyset	Acc
S: [+HR,+LR]	\emptyset	\emptyset

MAX[-LR]/N, MAX[-HR]/D \gg MAX[α F]

b.

Adyghe	N	Pro
A: [+HR,-LR]	Erg	\emptyset
O: [-HR,+LR]	\emptyset	\emptyset
S: [-HR,+LR]	\emptyset	\emptyset

MAX[-LR]/N \gg * α F \gg MAX[-HR]/D, MAX[α F]

c.

English	N	Pro
A: [+HR,-LR]	\emptyset	\emptyset
O: [-HR,+LR]	\emptyset	Acc
S: [+HR,+LR]	\emptyset	\emptyset

MAX[-HR]/D \gg * α F \gg MAX[-LR]/N, MAX[α F]

d.

Hindi	N	Pro
A: [+HR,-LR]	Erg	Erg
O: [-HR,+LR]	Acc	Acc
S: [+HR,+LR]	\emptyset	\emptyset

MAX[αF] ≫ MAX[-HR]/D, MAX[-LR]/N, *[αF]

e. No Accusative or Ergative case

*[αF] ≫ MAX[-HR]/D, MAX[-LR]/N, MAX[αF]

Inspection of [102] shows that “split ergativity” results when constraints MAX[-HR]/D and/or MAX[-LR]/N are ranked above [28b]. The same constraints give rise to “split accusativity”, “split dativity”, and “split genitivity”.

I illustrate this treatment of case split with a sketch of split dativity in Yimas. The case marking is summarized in [104] (Foley 1991):

[104]

Abstract Case	A	S	O	D
Abstract case features:	$\begin{matrix} +HR \\ -LR \end{matrix}$	$\begin{matrix} +HR \\ +LR \end{matrix}$	$\begin{matrix} -HR \\ +LR \end{matrix}$	$\begin{matrix} -HR \\ -LR \end{matrix}$
1/2P	ka	ama	nga	
other	mpɨ	impa		mpu

Assuming that Yimas’ structural cases are as in [105],

- [105] a. *ka, mpɨ*: $[-LR]$ (Ergative)
 b. *ama, impa*: $[\]$ (Nominative)
 c. *nga, mpu*: $[-HR]$ (Accusative/Dative)

the split is the result of assigning dative case ($[-HR, -LR]$) in place of nominative case to mark direct objects on the high end of the scale by MAX[-HR]/D:

Split dativity	MAX[-HR]/1,2P	*[αF]
1. $[-HR, +LR]$, Pronoun object		
a. $[\]$ (Nominative)	*	
b. $\text{☞} [-HR]$ (Accusative)		*
2. $[-HR, +LR]$, Noun object		
a. $\text{☞} [\]$ (Nominative)		
b. $[-HR]$ (Accusative)		*

Inverse morphology can be seen as a type of ergative head marking which assigns the morphological case feature $[-LR]$ to the subject, where the special Faithfulness constraints outrank the general faithfulness constraints. As a simple example we take the distribution of direct and inverse forms in the Paleosiberian language Koryak (after Comrie 1980:68).

[106]

Object	Subject			
	1st Person	2nd Person	3rd Singular	3rd Plural
1st Person	direct	inverse	inverse	inverse
2nd Person	direct	direct	inverse	inverse
3rd Singular	direct	direct	direct	inverse
3rd Plural	direct	direct	direct	inverse

To account for the differentiation between singular and plural we further differentiate the hierarchy as in [101a], and build in the number asymmetry by means of a constraint MAX[-LR]/PL (“plural transitive subjects must be marked as ergative”). The Koryak data are then derived as shown.

	MAX[-LR]/3	MAX[-LR]/2,3	MAX[-LR]/PL	*[αF]
1. [+HR,-LR]1Sg [-HR,+LR]3Sg: ‘I saw you.’				
1a. [-LR] [] (Inv.)				*
1b. ☞ [] [] (Dir.)				
2. [+HR,-LR]2Sg [-HR,+LR]1Sg: ‘You saw me.’				
2a. ☞ [-LR] [] (Inv.)				*
2b. [] [] (Dir.)		*		
3. [+HR,-LR]3Sg [-HR,+LR]3Pl: ‘He saw them.’				
2a. [-LR] [] (Inv.)	*	*		*
2b. ☞ [] [] (Dir.)	*	*		
4. [+HR,-LR]3Pl [-HR,+LR]3Sg: ‘They saw him.’				
2a. ☞ [-LR] [] (Inv.)	*	*		*
2b. [] [] (Dir.)	*	*	*	

The upshot is that an “ergative language” is a language that has ergative case (viz. [-LR]), no more, no less. There is no “ergative parameter”, and no ergative-specific grammatical machinery involving functional categories, special coindexing mechanisms, etc. “Ergativity” is no different from “genitivity”, “ablativity”, or “adessivity”. The same constraints that interact to give the typology of ergativity work in non-ergative languages such as Finnish.

The parallelism is underscored by that fact that in Finnish child language and in some dialects, the accusative ending *-t* is extended from pronouns to proper names and appellatives, e.g. *Lauri-t*, *isi-t* ‘daddy’ (Räisänen 1975, Hakulinen & Karlsson 1979:188). This development results in an accusative comparable to that of the ergative language Rennellese, which marks a direct object with *i* if it is a pronoun or proper noun (Chung 1976, 299).

3.3 The basis of the noun/pronoun split

We have repeatedly referred to the contrast between the nominal and pronominal paradigms, manifested in the presence of morphological accusative case in the latter. This involved a slight oversimplification of the actual distribution of the two declension types, for some pronouns actually follow the nominal declension. These include the so-called 3P neuter pronouns *se* (Sg.) and *ne* (Pl.) and (optionally) the interrogative *kuka*, *ken* discussed in section 1.3.

- [107] a. *Hän näh-tiin. Häne-t näh-tiin.
 He(**Nom**) see-PassPast He-**Acc** see-PassPast
 ‘He was seen.’
- b. Se näh-tiin. *Se-n näh-tiin
 It(**Nom**) see-PassPast It-**Gen** see-PassPast
 ‘It was seen.’
- *He ol-isi hyvä ol-la varovais-i-a.
 They(**Nom**) be-Subj(3Sg) good be-Inf careful-Pl-Part
 ‘It would be good for them to be careful.’
- Ne ol-isi hyvä ol-la paksu-j-a.
 They(**PlNom**) be-Subj(3Sg) good be-Inf thick-Pl-Part
 ‘It would be good for them to be thick.’

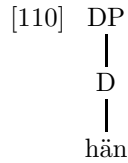
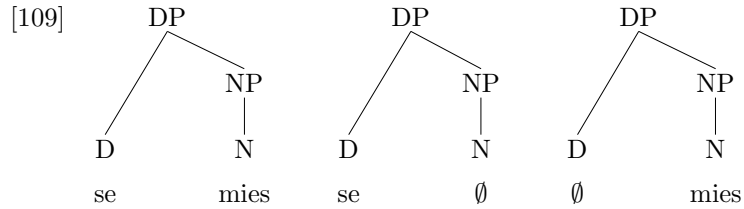
It is evident therefore that the dividing line does not run exactly between nouns and pronouns.

The real division seems to be between nonprojecting DPs and projecting DPs. Personal pronouns are intransitive determiners, i.e. they cannot take NP complements. *Se* is not a personal pronoun but a determiner that can take NP complements; syntactically it belongs to the same class as a demonstrative pronoun like *tämä* ‘this (one)’, or *joku* ‘some(one)’. The same is true of the relevant cases of *kuka* (e.g. *kuka roisto* ‘what evildoer?’). As [108b] illustrates, they combine freely even with NPs denoting humans.⁴²

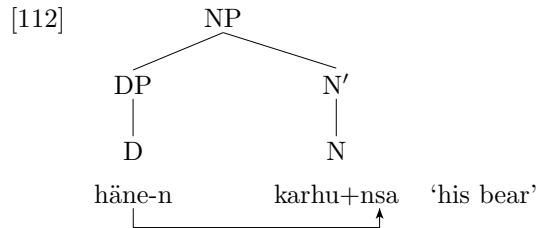
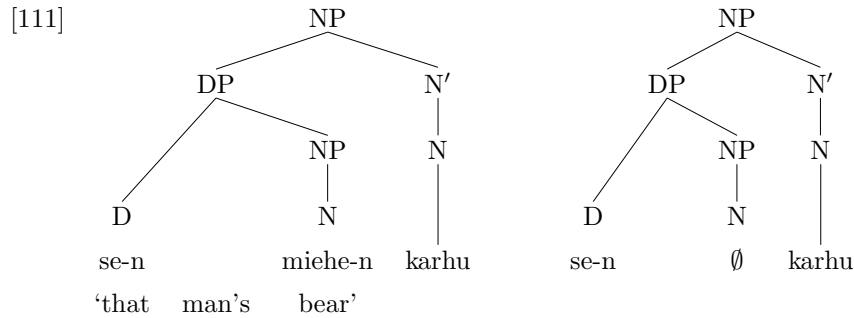
- [108] a. *Hän mies näh-tiin.
 He(Nom) man see-PassPast
 ‘He man was seen.’
- b. Se mies näh-tiin.
 That(Nom) man see-PassPast
 ‘That man was seen.’

⁴²This throws doubt on the suggestion sometimes made that animacy is the relevant criterion (Nelson 1998:161).

Assuming the structures in [109] and [110] we can explain the failure of transitive Ds to get accusative case from their need to agree morphologically with the nominal head, which cannot get accusative case, cf. the cases discussed in 1.3.



The proposed structural distinction is independently supported by yet another apparent noun/pronoun split which also groups the pronouns *se* and *kuka*, *ken* with the nouns. Nouns agree in person and number with a pronominal possessor, but not with a nominal possessor or with possessive *se-n* ‘its’, *kene-n* ‘whose’. This difference follows on the assumption that only nonprojecting categories trigger possessive agreement.



3.4 Conclusion

I have argued that abstract Case is defined by the same category system at Semantic Form and in morphosyntactic representations, and that case assignment is determined by optimizing that correspondence between the cases at the two levels subject to a set of ranked constraints. A theory built on this principle was shown to provide a natural account of Finnish clause structure with its various kinds of subjects and its bewildering mismatches between grammatical relations, structural positions, and morphosyntactic case. At the same time these findings constitute a small contribution to the development of OT-based syntax. I show that OT brings two key improvements to an earlier account where the relation between abstract Case and morphosyntactic case was governed by an unviolable Unification constraint. First, the more complex case system of Finnish requires more radical but violable FAITHFULNESS constraints of the sort that OT makes available. Secondly, OT provides a framework where universal constraints motivated by cross-linguistic typological generalizations can be mobilized to explain the apparently idiosyncratic case alternations of Finnish.

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